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REFERENCES:

1. Eisenberg, B. C.: Clinical Medicine *5*:897-904 (July) 1958.
2. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958.
3. Robinson, H. M., et al.: So. Med. J. *50*:1282 (Oct.) 1957.

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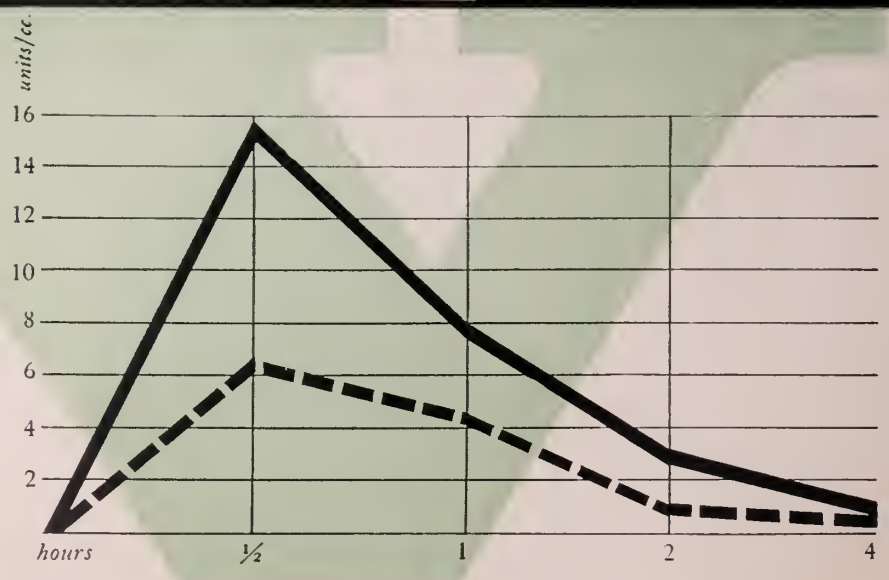
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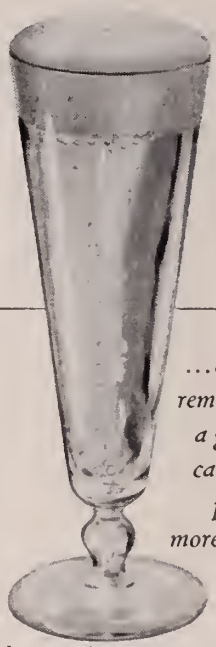
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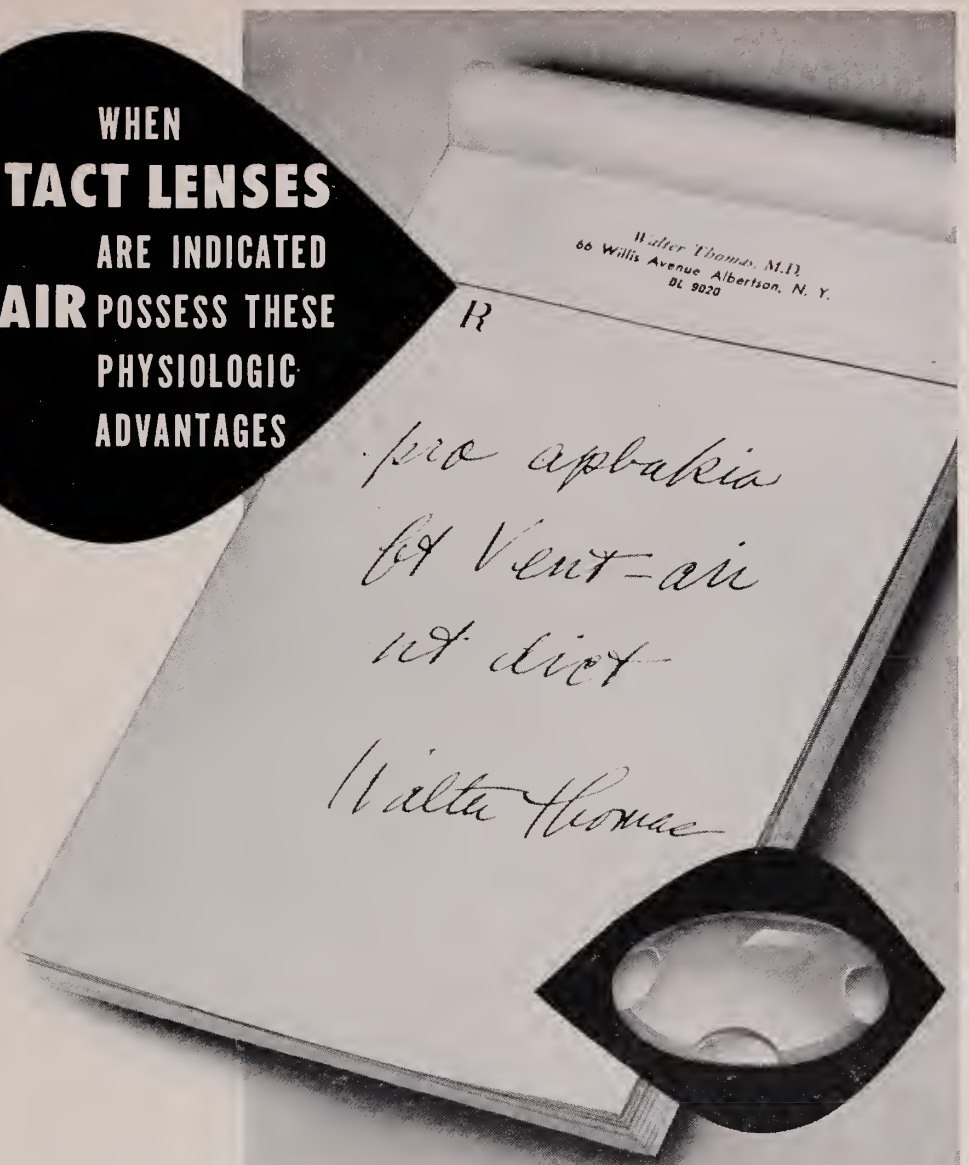
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[1]Sadove, Max S. and Schwartz, Lester: An Evaluation of Buffered Versus Nonbuffered Acetylsalicylic Acid, Postgraduate Medicine; 24:183, August, 1958.

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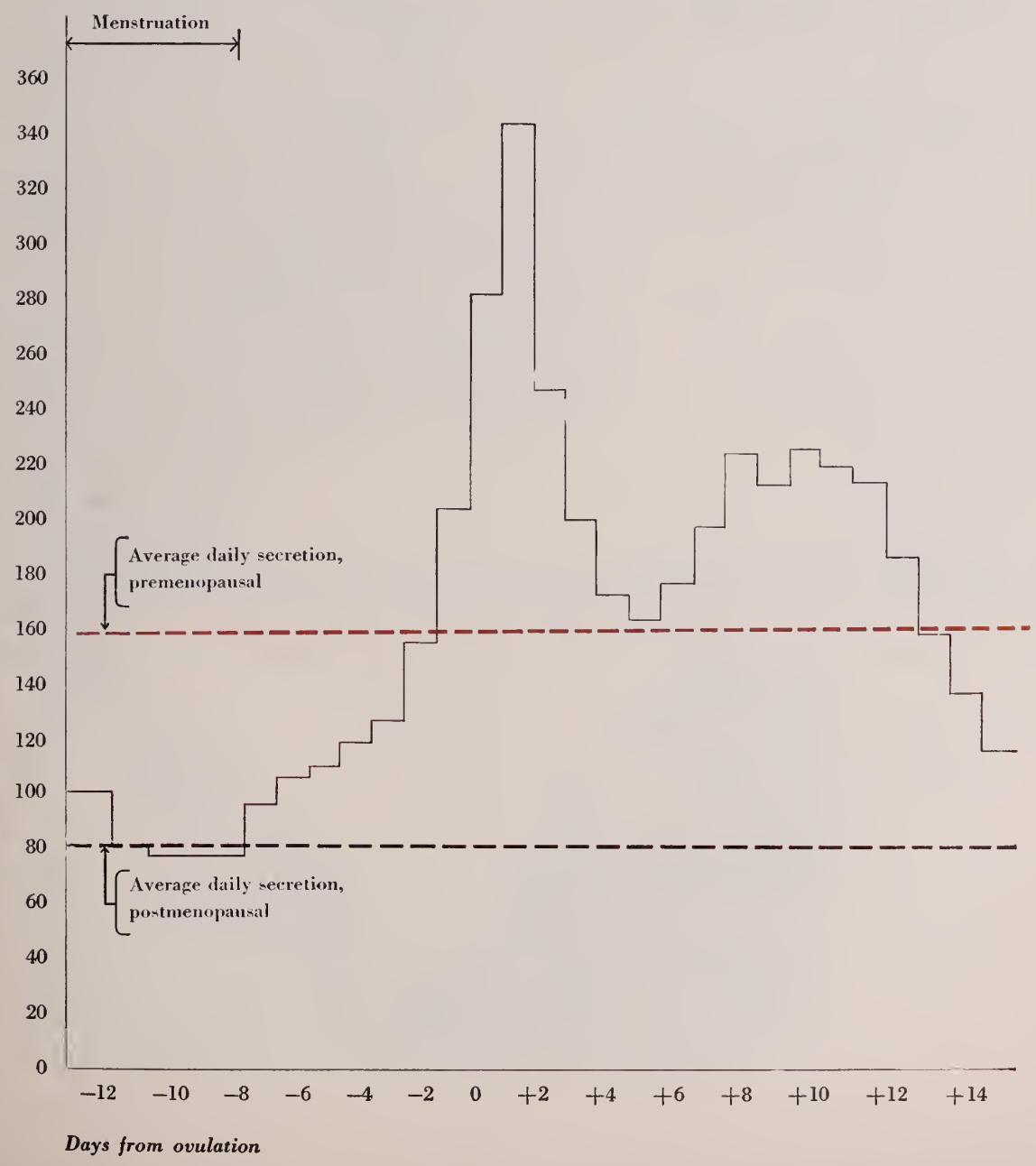
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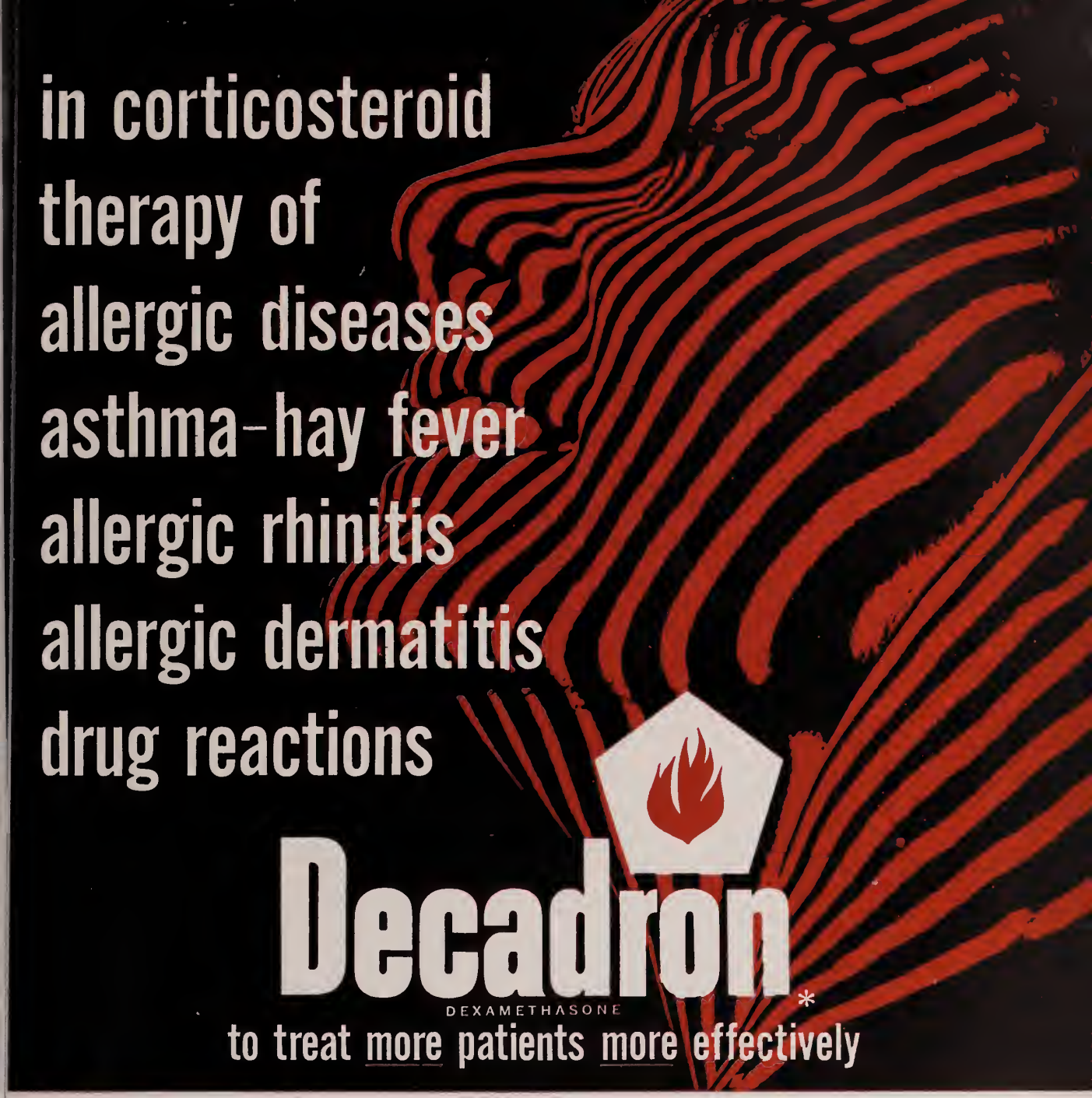
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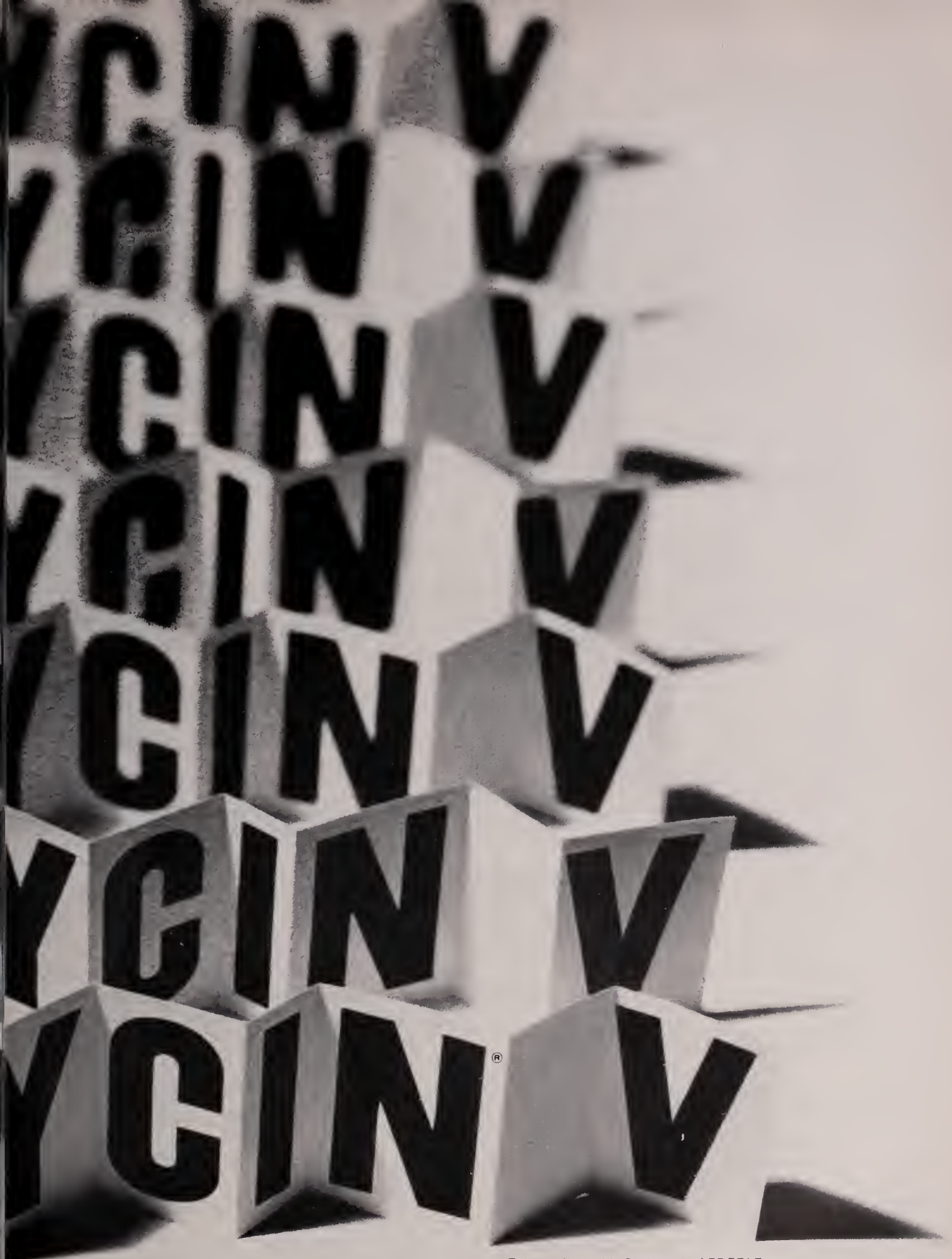
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and calms the emotions.

for a 3-way synergistic action . . .

Each tablet NICOZOL w/Reserpine contains:

Pentylenetetrazol	100 mg.	(cerebral stimulant & analeptic)
Niacin	50 mg.	(vasodilator)
Reserpine	0.25 mg.	(tranquilizer-sedative)

Clinically Established[1, 2]

In studies of 75 patients (average age—72), with typical mental and emotional symptoms together with alternate periods of depression and agitation, 87% showed gratifying response to NICOZOL w/RESERPINE.

"This therapy afforded relief of agitation . . . improved memory, behavior, sociability, appearance and tidiness. Symptoms of confusion, aggressiveness, hostility and disorientation also were relieved." Fewer side effects were noted.





AT HOME . . . NOT IN A HOME

". . . patients who otherwise would have required institutionalized care were managed at home . . . ."[2]

Prescribed early, NICOZOL w/RESERPINE may avoid "later commitment to nursing homes or state hospitals."[1, 2]

Write for professional samples and literature

DRUG Specialties INC.

DRUG SPECIALTIES, INC.

WINSTON-SALEM N. C.

1. Proctor, R. C.: Clin. Med. 6: 717 (June) 1957
2. Proctor, H. ., Bailey, W. H. and Morehouse, W. G.: J. Am. Geriatrics Soc. (April) 1958.

in peptic ulcer

REFRACTORY CASES RESPOND TO

NEW

DARICON* *tablets*

OXYPHENCYCLIMINE HYDROCHLORIDE

POTENT ANTICHOLINERGIC ACTION

curbs secretion when excessive
normalizes motility when overactive

Activity appears to be restricted to the desired site of action.
Predictable therapeutic response in refractory cases.

Potency and Prolonged Duration of Action
10 mg. b.i.d. Average Dose · Supplied as:
10 mg. white, scored tablets

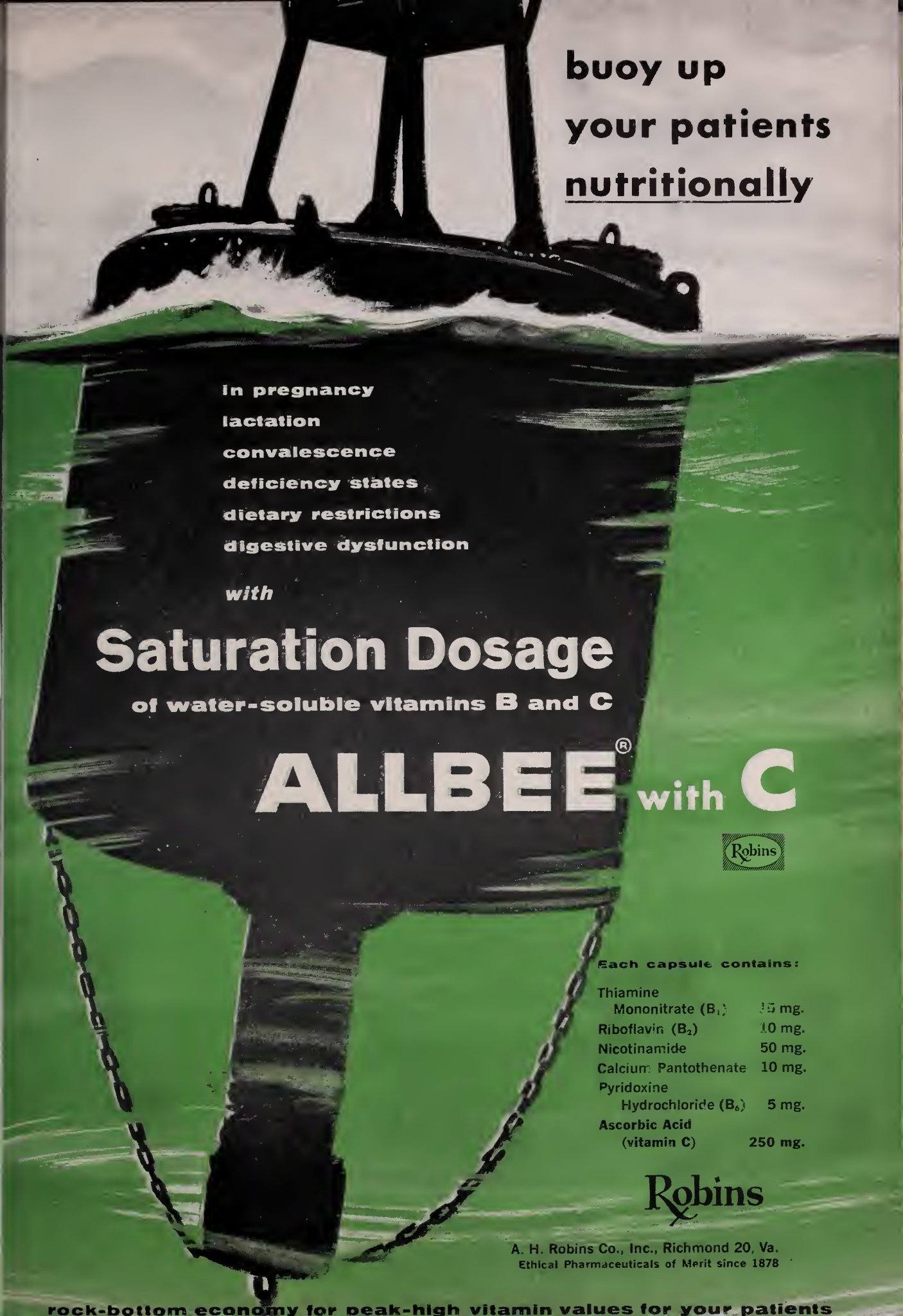
References: 1. Finkelstein, Murray: Journal of Pharmacology and Experimental Therapeutics, in press. 2. Winkelstein, Asher: Paper in preparation.

Trademark

Pfizer *Science for the world's well-being*

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.,
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buoy up
your patients
nutritionally
in pregnancy
lactation
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deficiency states
dietary restrictions
digestive dysfunction
with
Saturation Dosage
of water-soluble vitamins B and C
ALLBEE® with C
Robins
Each capsule contains:
Thiamine Mononitrate (B_1) 15 mg.
Riboflavin (B_2) 10 mg.
Nicotinamide 50 mg.
Calcium Pantothenate 10 mg.
Pyridoxine Hydrochloride (B_6) 5 mg.
Ascorbic Acid (vitamin C) 250 mg.
Robins
A. H. Robins Co., Inc., Richmond 20, Va.
Ethical Pharmaceuticals of Merit since 1878
rock-bottom economy for peak-high vitamin values for your patients

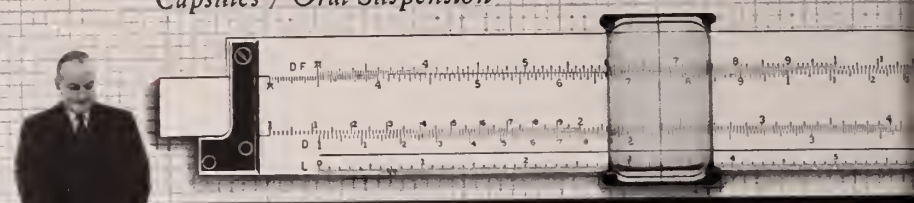
℞ PRONOUNCED TAY-O

Tao*

(triacetyloleandomycin)

Capsules / Oral Suspension

** designed for superior control of common Gram-positive infections*

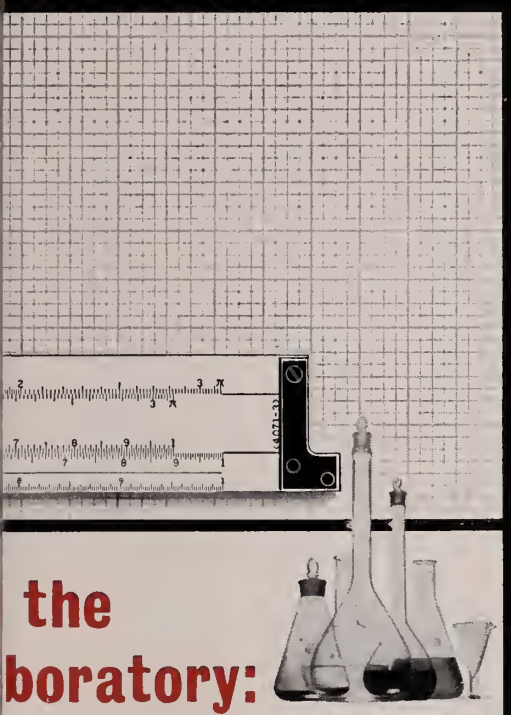




in the patient:

95% effective in published cases[1-8]

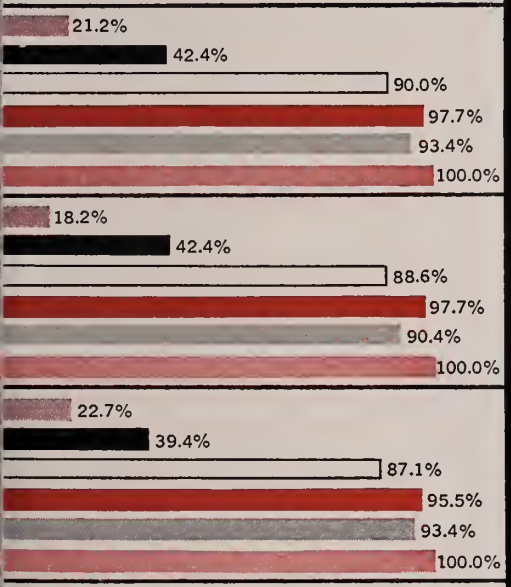
Conditions treated	No. of Patients	Cured	Improved	Failure
ALL INFECTIONS	**558**	**448**	**80**	**30**
Respiratory infections	**258**	**208**	**31**	**19**
Pharyngitis and/or tonsillitis	65	58	5	2
Pneumonia	90	66	17	7
Infectious asthma	44	38	–	6
Otitis media	31	29	2	–
Other respiratory (bronchitis, bronchiolitis, bronchiectasis, pneumonitis, laryngotracheitis, strep throat)	28	17	7	4
Skin and soft tissue infections	**230**	**191**	**38**	**1**
Infected wounds, incisions and lacerations	41	33	8	–
Abscesses	51	43	8	–
Furunculosis	58	51	6	1
Acne, pustular	43	28	15	–
Pyoderma	19	19	–	–
Other skin and soft tissue (infected burns, cellulitis, impetigo, ulcers, others)	18	17	1	–
Genitourinary infections	**28**	**19**	**3**	**6**
Acute pyelitis and cystitis	10	8	2	–
Urethritis with gonorrhea or cystitis	8	8	–	–
Pyelonephritis	4	1	–	3
Salpingitis	5	1	1	3
Pelvic inflammation with endometriosis	1	1	–	–
Miscellaneous (adenitis, enteritis, enterocolitis, subacute bacterial endocarditis, fever, hematoma, staphylococcus carriers, osteomyelitis, tenosynovitis, septic arthritis, acute bursitis, periarthritis)	42	30	8	4



the
boratory:

r 90% effective
inst resistant staph

PARATIVE TESTS BY THREE METHODS
, TUBE DILUTION, CYLINDER PLATE)
30 STAPHYLOCOCCI[9]



ntibiotic A 2-10 units — Tao 2-15 mcg.
ntibiotic B 5-30 mcg. — Antibiotic D 2-15 mcg.
ntibiotic C 5-30 mcg. — Antibiotic E 5-30 mcg.

entage of organisms inhibited by the range of
entrations listed for each antibiotic.

Other Tao advantages:

Rapidly absorbed—stable in gastric acid,[7] TAO needs no retarding protective coating

Low in toxicity—freedom from side effects in 96% of patients treated; cessation of therapy is rarely required

Highly palatable—"practically tasteless"[7] active ingredient in a pleasant cherry-flavored medium.

Dosage and Administration: Dosage varies according to the severity of the infection. **For adults,** the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. **For children** 8 months to 8 years, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since TAO is therapeutically stable in gastric acid, it may be administered without regard to meals.

Supplied: TAO Capsules—250 mg. and 125 mg., bottles of 60. TAO for Oral Suspension—1.5 Gm., 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. Koch, R., and Asay, L. D.: J. Pediat., in press. 2. Leming, B. H., Jr., et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 3. Mellman, et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 4. Olansky, S., and McCormick, G. E., Jr.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 5. Shubin, H., et al.: Antibiotics Annual 1957-1958, New York, N. Y., Medical Encyclopedia, Inc., 1958, p. 679. 6. Isenberg, H., and Karelitz, S.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 7. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy 5:527 (Aug.) 1958. 8. Kaplan, M. A., and Goldin, M.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 9. Truant, J. P.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958.

TAO dosage forms—
for specific clinical situations

TAO Pediatric Drops

For children—flavorful, easy to administer.

Supplied: When reconstituted, 100 mg. per cc. Special calibrated droppers—5 drops (approx. 25 mg. of TAO) and 10 drops (approx. 25 mg. of TAO). 10 cc. bottle.

TAO-AC (TAO analgesic, antihistaminic compound)

To eradicate pain and physical discomfort in respiratory disorders.

Supplied: In bottles of 36 capsules.

TAOMID* (TAO with triple sulfas)

For dual control of Gram-positive and Gram-negative infections.

Supplied: Tablets, bottles of 60. Oral Suspension, bottles of 60 cc.

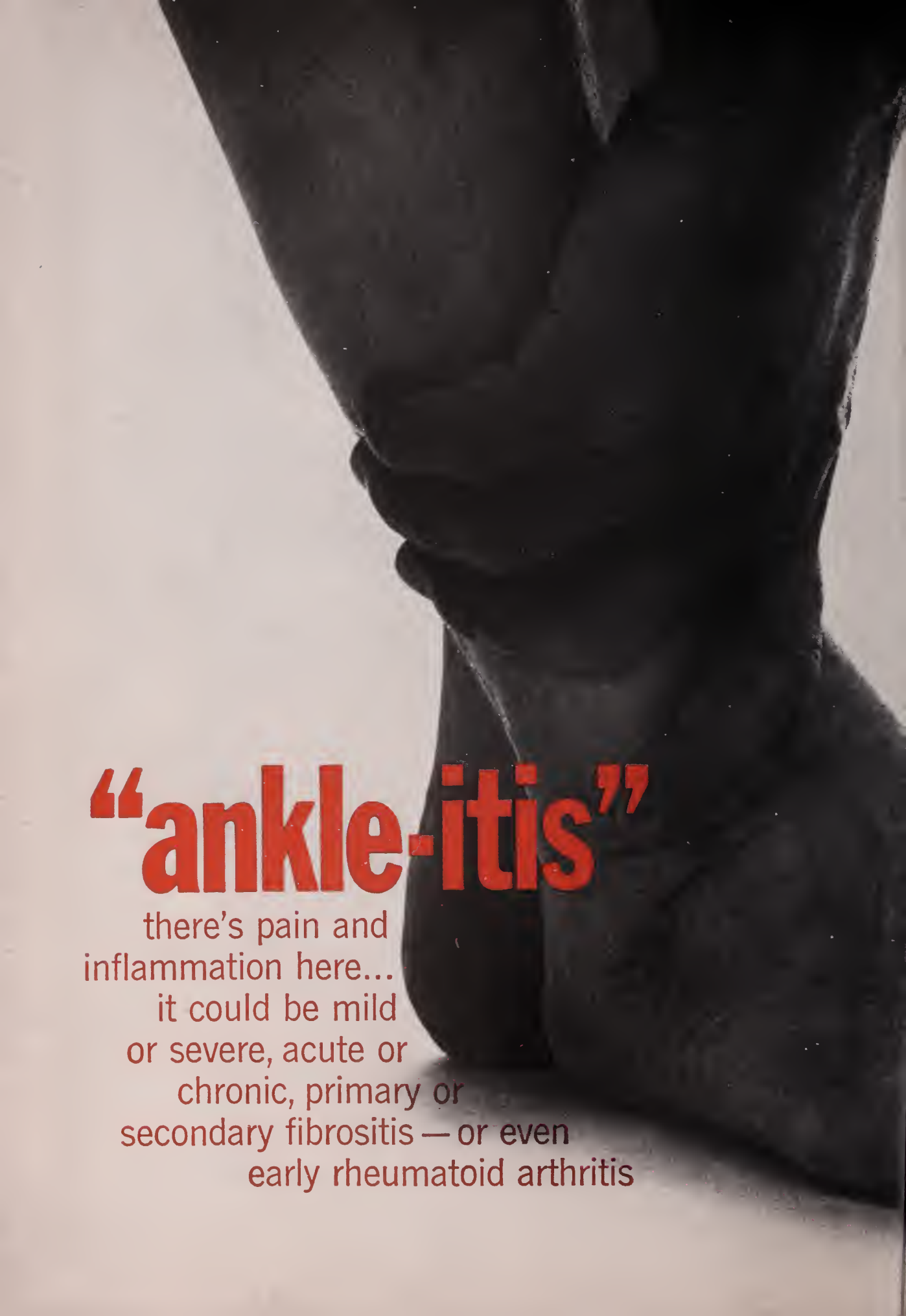
Intramuscular or Intravenous

For direct action—in clinical emergencies.

Supplied: In 10 cc. vials.

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Science for the World's Well-Being


"ankle-itis"
there's pain and
inflammation here...
it could be mild
or severe, acute or
chronic, primary or
secondary fibrositis — or even
early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

assured anti-inflammatory effect of low-dosage corticosteroid[1] . . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function . . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more conservative and manageable than full-dosage corticosteroid therapy—

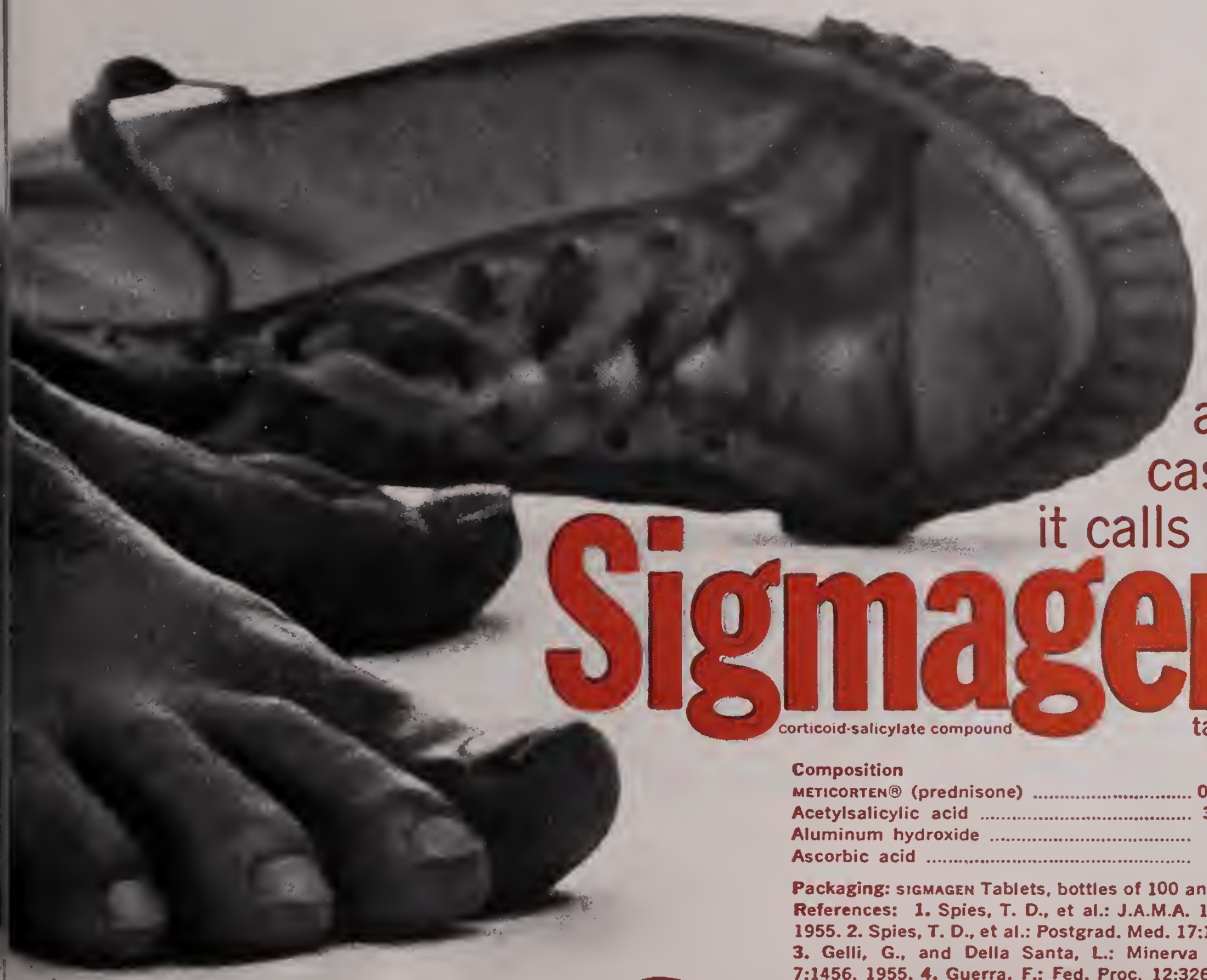
much less likelihood of treatment-interrupting side effects[1-6] . . . reduces possibility of residual injury . . . simple, flexible dosage schedule

THERAPY SHOULD BE INDIVIDUALIZED

acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

precautions: Because SIGMAGEN contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of SIGMAGEN.



in any case it calls for

Sigmagen®

corticoid-salicylate compound tablets

Composition

METICORTEN® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: SIGMAGEN Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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SG-J-618



running noses



and open stuffed noses orally

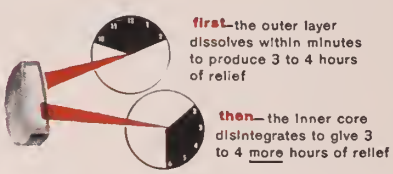
with TRIAMINIC, the oral nasal decongestant

- in nasal and paranasal congestion
- in sinusitis
- in postnasal drip
- in allergic reactions of the upper respiratory tract

safer and more effective than topical medication

- reaches *all* respiratory membranes systemically
- avoids "nose drop addiction"
- presents no problem of rebound congestion
- provides longer-lasting relief

Relief with Triaminic is prompt and prolonged because of this special timed-release action . . . beneficial effect starts in minutes, lasts for hours.



Each TRIAMINIC *Tablet provides:*

Phenylpropanolamine HCl . . .	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

One-half of this formula is in the outer layer, the other half is in the core.

Dosage: One tablet in the morning, mid-afternoon and in the evening, if needed.

Triaminic®

Also available: For the occasional patient who requires only half dosage: timed-release TRIAMINIC JUVELETS. Each Juvelet is equivalent to ½ of a Triaminic Tablet.

For those patients who prefer liquid medication: TRIAMINIC SYRUP. Each 5 ml. tsp. of this palatable syrup is equivalent to ¼ of a Triaminic Tablet.

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Relieve moderate or severe pain

Reduce fever

Alleviate the general malaise of upper respiratory infections

'TABLOID'

'EMPIRIN' COMPOUND®

WITH

CODEINE PHOSPHATE*

maximum codeine analgesia/optimum antipyretic action

*Subject to Federal Narcotic Regulations

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Symbols OF PROVEN PAIN RELIEF



gr. 1



gr. ½



gr. ¼



gr. ⅛

Formulas for dependable relief...

...from moderate to severe pain complicated by tension, anxiety and restlessness.

'CODEMPIRAL'® NO. 3*



Codeine Phosphate . . . . . gr. ½
Phenobarbital . . . . . gr. ¼
Acetophenetidin . . . . . gr. 2½
Aspirin (Acetylsalicylic Acid) . . . . . gr. 3½

'CODEMPIRAL'® NO. 2*



Codeine Phosphate . . . . . gr. ¼
Phenobarbital . . . . . gr. ¼
Acetophenetidin . . . . . gr. 2½
Aspirin (Acetylsalicylic Acid) . . . . . gr. 3½

...from pain of muscle and joint origin, simple headache, neuralgia, and the symptoms of the common cold.

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'EMPIRIN' COMPOUND®



Acetophenetidin . . . . . gr. 2½
Aspirin (Acetylsalicylic Acid) . . . . . gr. 3½
Caffeine . . . . . gr. ½

...from mild pain complicated by tension and restlessness.

'EMPIRAL'®



Phenobarbital . . . . . gr. ¼
Acetophenetidin . . . . . gr. 2½
Aspirin (Acetylsalicylic Acid) . . . . . gr. 3½

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Proven

in over three years of clinical use
in over 600 clinical studies

Specific

FOR RELIEF OF ANXIETY
AND MUSCLE TENSION

Selective

Does not interfere with autonomic function
Does not impair mental efficiency,
motor control, or normal behavior
Has not produced hypotension,
agranulocytosis or jaundice

MEPROBAMATE (WALLACE)

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Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets.

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ELECTIVE AND TRAUMATIC

use XYLOCAINE *first...*
as a local anesthetic
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SWAB SPRAY INFILTRATION NERVE BLOCK



Xylocaine HCl solution, the versatile anesthetic for general office surgery, relieves pain promptly and effectively with adequate duration of anesthesia. It is safe and predictable. Local tissue reactions and systemic side effects are rare. Supplied in 20 cc. and 50 cc. vials; 0.5%, 1% and 2% without epinephrine and with epinephrine 1:100,000; also in 2 cc. ampules; 2% without epinephrine and with epinephrine 1:100,000.

XYLOCAINE® HCl SOLUTION
(brand of lidocaine*)

Astra Pharmaceutical Products, Inc., Worcester 6, Mass., U.S.A.

See PDR

*U.S. PAT NO. 2,441,498 MADE IN U.S.A.

Low Dosage KYNEX* for G.U. Infections

Sulfamethoxypyridazine Lederle



Unusual Antibacterial and Anti-infective Properties—More soluble in acid urine[1] . . . higher and better sustained plasma levels than any other known and useful antibacterial sulfonamide.[2]

Unprecedented Low Dosage—Less sulfa for the kidney to cope with . . . yet fully effective. A single daily dose of 0.5 to 1.0 Gm. maintains higher plasma levels than 4 to 6 Gm. daily of other sulfonamides—a notable asset in prolonged therapy.[2]

Dosage: The recommended adult dose is 1 Gm. (2 tablets) the first day, followed by 0.5 Gm. (1 tablet) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours.

KYNEX—WHEREVER SULFA THERAPY IS INDICATED

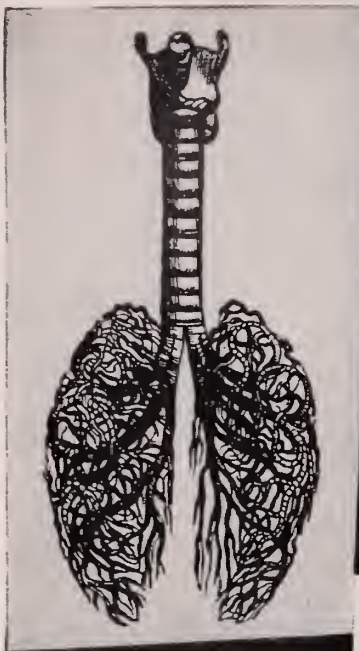
Tablets: Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

references:
1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958
2. Editorial: *New England J. Med.* 258:48-49, 1958.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

*Reg. U. S. Pat. Off.



an added measure of protection in your treatment of upper respiratory disorders

SULTUSSIN®

TABLETS (new!) and LIQUID



SULTUSSIN triple sulfonamides add their antibacterial power to your choice of antibiotic to....

- help prevent and clear up secondary infections faster and more effectively
- avert the dangers of rheumatic fever, nephritis, otitis media and other complications

SULTUSSIN simultaneously affords maximum relief from sneezing, stuffed or runny nose, cough, wheezing, malaise, slight fever, and other distressing symptoms of the severe common cold, coughs, influenza, etc.

antibacterial chemoprophylaxis • expectorant
antiallergic • bronchodilator • antispasmodic



In new raspberry flavored tablets and pleasant tasting liquid form.

	Each tablet provides:	Each teaspoonful (5 cc.) provides:
Sulfadiazine	0.083 Gm.	0.166 Gm.
Sulfamerazine	0.083 Gm.	0.166 Gm.
Sulfamethazine	0.083 Gm.	0.166 Gm.
Pyrilamine Maleate	3.125 mg.	6.25 mg.
Phenyltoloxamine Dihydrogen Citrate	3.125 mg.	6.25 mg.
Glyceryl Guaiacolate	25.0 mg.	50.0 mg.
Ephedrine Sulfate	2.5 mg.	5.0 mg.

Supplied:
Liquid in 4 ounce and pint bottles.
Tablets, bottles of 50 and 100.

REFER TO PDR
PAGE 825

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Oldest Manufacturing Pharmaceutical House in America • Founded 1824

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learn all about new VITERRA PEDIATRIC,
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see what happens when
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3 Aha!
An exact 0.6 cc.
comes out this spout.
Never more, never less.

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bottle's tight seal.
No risk of
contamination.



6 Let's take a minute
to admire the formula.

7 *That* means
no hot-weather
loss of potency.

8 Now for a farewell treat, a taste of delicious, orange-y VITERRA PEDIATRIC. How will you have it — in fruit juice? On cereal? Straight from the spoon?

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ALLOW 30 SECONDS BETWEEN DISPENSINGS

Special note to doctors who took this tour:

Problems of over- and under-dosage, spillage, spoilage or leakage disappear with VITERRA PEDIATRIC'S new Metered-Flow bottle. Why not consider these advantages when you recommend a vitamin supplement?

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FOR THE SLOW-TO-GROW CHILD B-VITAMIN SUPPORT...PLUS THE PROTEIN-POTENTIATING ACTION OF L-LYSINE..PLUS THE EXCEPTIONALLY WELL-TOLERATED HEMATINIC PERFORMANCE OF FERRIC PYRO-PHOSPHATE...AND THE IRON AND B_{12} ENHANCING ACTION OF SORBITOL IN DELICIOUS CHERRY FLAVORED

INCREMIN® WITH IRON SYRUP

Lysine–Vitamins

BUILDS IRON RESERVES
BOOSTS APPETITE
PROMOTES GROWTH

Each daily teaspoonful dose (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	0.75%

Bottles of 4 and 16 fl. oz.

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for colds of every description

one inclusive prescription

CORICIDIN® FORTE
CAPSULES

Each CORICIDIN FORTE Capsule provides
CHLOR-TRIMETON® Maleate

(chlorprophenpyridamine maleate)	4 mg.
Salicylamide	0.19 Gm.
Phenacetin	0.13 Gm.
Caffeine	30 mg.
Ascorbic acid	50 mg.
Methamphetamine hydrochloride	1.25 mg.

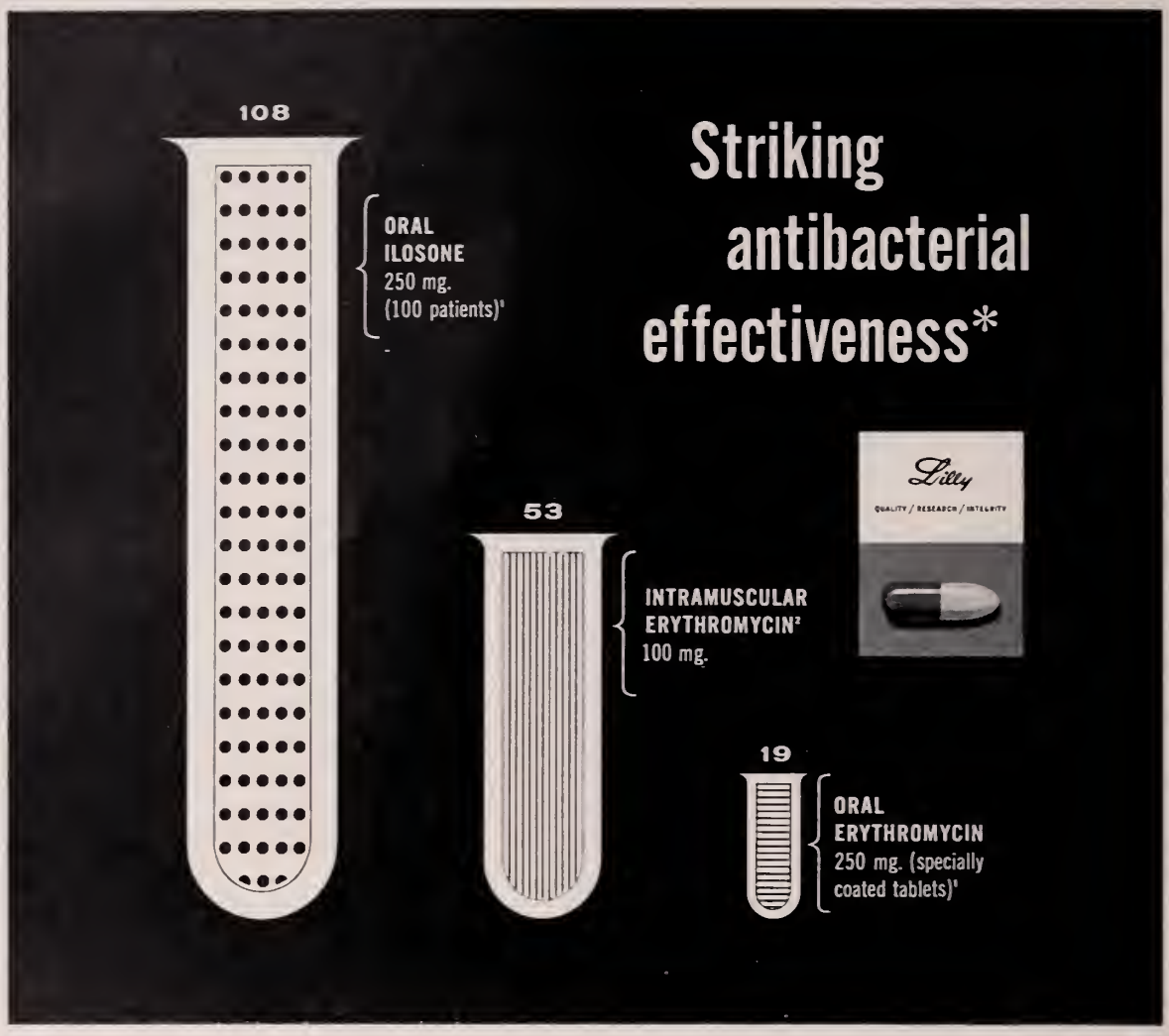
Dosage—1 capsule q. 4-6.

Supplied—Bottles of 100 and 1000.

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ILOSONE™ *assures a more decisive clinical response in almost every common bacterial infection*

(erythromycin ester, Lilly) as the propionate

Ilosone provides more potent, longer-lasting therapeutic levels in the serum within minutes after administration. A fast, decisive response is assured in almost every common bacterial infection.

Usual adult dosage is one or two 250-mg. Pulvules® every six hours, according to severity of infection. For optimum effect, administer on an empty stomach. (A 125-mg. pediatric Pulvule is also available.) In bottles of 24.

*Shown by *how many times* the serum can be diluted two hours after administration of the antibiotic and still inhibit identical pathogenic strains of bacteria. This is the *Tube Dilution Technique*, which is regarded by leading authorities as the most meaningful method of comparing different antibiotics. It shows not merely the level of antibiotic in the blood but the actual antibacterial effectiveness of that level.

1. Griffith, R. S., *et al.*: Antibiotic Med. & Clin. Therapy, *5*:609 (October), 1958. Note: Peak levels with the oral erythromycin tablets (thirty-three dilutions) were not observed until four hours after administration. 2. Data from Griffith, R. S.: Antibiotics Annual, p. 269, 1954-1955.

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The Virginia
MEDICAL
MONTHLY

January, 1959
Vol 86, No. 1
Whole No. 1280

Guest Editorial . . . .

Men to Remember

IT IS TRUE that most of us as children had heroes, generally men of great athletic ability or men who were successful in wars our fathers fought. As we became older and elected to become a part of the medical profession, most of us found men to admire, and in retrospect it is at times astonishing to realize that those men were no older than we are now. With the passage of time we realize that these men of memory were not as wise as we students believed, but what we knew of them at the time was and still should be an inspiration. What is possibly most important is the fact that, regardless of age, these men gave us something that was good. It was not always by any means an old sage who gave us his pearls of wisdom.

Perhaps it is worth remembering the characteristics these medical acquaintances had when we knew them early in our professional life. We found them intelligent but willing to admit gracefully vacuums in medical knowledge. We knew them as successful physicians but most modest in letting us know about it. They had dignity, yet were capable of being warm and humorous when the occasion arose. While they frequently differed with the opinions of their most intimate colleagues yet face to face or behind their backs their remarks were always accompanied by a smile. They believed that they were at the service of patients, poor or rich, during night and day, and their interest and their personalities never changed when talking to any patient. They appreciated and perhaps participated in the research efforts of their time, but they never believed that one man's efforts were more important than those of a different bent. They knew in the last analysis the sick depend upon a physician who knew and who cared. They recognized that medical knowledge had so expanded that it behooved men of intelligence not to be wise in too many fields, and from this conviction they exhibited respect for their diversified colleagues. They expected more of us than we could possibly learn, with the hope that we would produce our best. They believed that changing times should not alter a man's ethical behavior, nor the times distort clear thinking about the economics of medicine. They delighted in telling the story of doctor so and so who died of a broken heart because all the patients in his community were not his very own.

What was additionally amazing about these men was their diversity of interest and their knowledge about many things unrelated to medicine. They never adopted the

thesis that to be proficient in medicine one had to exclude all other intellectual growth, and they lived lives to prove it.

Perhaps time has embellished many of the characteristics we attributed to our friends of the past. If by some fluke of nature they lacked them in this world, we still wish it for them in the next.

What is the treasure of our memory is the fact that our older friend cr friends believed in us and encouraged us to believe that we were well alcng our chosen road. This faith in cur future was almost like a great spark of life itself.

Perhaps it is more important now to realize that as we have become older we too must try to transmit to our colleagues and to younger men some of the gifts we received from our beneficent teachers. Who knows? Some rare day a foolish man may think the same of us.

Thomas W. Murrell, Jr., M.D.

Medical Jokes, Cartoons and Poems on Exhibit

The Medical School Library of the University of Virginia is exhibiting medical jokes, cartoons and poems from its collection. The exhibit will be up until February.

Although this group was originally classified as physician and scientist jokes, the subject matter overflows to most of the specialties, nurses, medical students, patients and even such ancillary service jokes as a charwoman interrupting a medical conference to put in her diagnosis.

There are medical jargon jokes, from over simplification to under simplification; there are lady physician jokes; there are jokes of pharmacists spoofing physicians' inability to write legibly; there are jokes about experimentation results linking tobacco and cancer. There are obesity jokes and, of course, psychoanalysis jokes. There are even a few Christmas jokes.

Acute Cardiac Emergencies

Their Diagnosis and Management

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PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIAS

CLINICALLY auricular and nodal tachycardias cannot be differentiated. A positive history of sudden onset and sudden cessation of the rapid palpitation is of great help in establishing the diagnosis. The attacks usually start suddenly with a ventricular rate of 180 to 220 per minute. This ventricular rate is usually faster than flutter and there is absolutely no change in the rate associated with change in position, exercise, et cetera. The rhythm is absolutely regular in contrast to the rhythm of ventricular tachycardias where there is often very slight irregularity sufficient to cause slight changes in the intensity of certain heart sounds.

The episodes may cease quickly and if the person has a normal heart there is no great haste about trying to stop the attack. Carotid sinus pressure and/or eyeball pressure may stop it. If this fails and if the patient is not already fully digitalized, the treatment of choice is the intravenous administration of lanatoside C, giving 1.2 milligrams or even 1.6 milligrams. If the patient has not had any digitalis, oral digitoxin may be tried as follows: Digitoxin, milligrams 0.4 every three hours for three doses, or perhaps milligrams 0.4 every one to two hours in severe cases, for three doses.

Quinidine sulphate may be tried if the particular patient presents no contraindication to its use. The method of administration is as discussed under "Paroxysmal Auricular Fibrillation".

If the above methods fail to restore normal rhythm the use of Methacholine may be considered. However, it is definitely dangerous but highly potent. It is safest to begin with a small dose such as milligrams 2 subcutaneously, and if no benefit is obtained to give 5 milligrams, then 10 milligrams, then 20 milligrams. It is very important to remember that one must wait thirty minutes before giving an additional dose of this potent medicine. It is a very dangerous drug to use in infants, elderly patients or severely ill patients. Whenever it is used a syringe containing atropine sulphate, grains 1/100, should be ready for immediate use in case of development of alarming symptoms such as collapse or respiratory obstructions.

Since lanatoside C is so efficient in the treatment of this condition and since it is relatively harmless I would again suggest a trial with it first. Neostigmine, milligrams 1, given intramuscularly has been tried in some cases with benefit.

PAROXYSMAL AURICULAR FIBRILLATION

Paroxysmal auricular fibrillation is the most common arrhythmia of serious import. In this section of the country it occurs most frequently with arteriosclerotic heart disease and secondly with rheumatic heart disease. It may be associated with thyrotoxicosis and in such cases the treatment is unsatisfactory until the thyrotoxicosis has been controlled.

Paroxysmal auricular fibrillation usually starts suddenly and the ventricular rate ranges from around 130 to 170 and the rhythm is, of course, totally irregular. There is a pulse deficit and of course the heart sounds vary a great deal. Practically speaking, a rhythm that on auscultation appears totally irregular, associated with a ventricular rate of above 130, may be considered as due to auricular fibrillation and treated as such, even without electrocardiographic confirmation.

There are in general two main methods of treatment of paroxysmal auricular fibrillation. In cases of auricular fibrillation, proven by electrocardiogram, I should use oral digitoxin first, for at times the rapid ventricular rate may rather suddenly cause failure and/or shock. If the patient has had no digitalis within two weeks, the dosage will vary with the severity of the symptoms; if it seems apparent that congestive failure is present or eminent then digitoxin, milligrams 1.2, may be given at once; in less severe cases digitoxin, milligrams 0.4, every three to four hours for three doses may be tried.

If the patient has some congestive failure and has been partially digitalized, lanatoside C (Cedilanid) may be given intravenously. The dosage again will vary with the severity of symptoms. However, since

lanatoside C is rapidly excreted and since in auricular fibrillation the rate of ventricular contraction is such a good indicator of the degree of digitalization it is safe to use larger doses of 1.2 milligrams or even 1.6 milligrams if the ventricular rate is rapid.

If heart disease cannot be demonstrated or if the patient has no signs of congestive failure then quinidine sulphate should be used. Quinidine may also be used after the ventricular rate has become normal. There are various methods of giving quinidine; if the patient can be in the hospital or seen every two hours, I prefer the following method: If after a test dose of quinidine, no untoward symptoms develop, then give quinidine sulphate, grains 6, every two hours for five, six or seven doses. If it is impossible to see the patient frequently then smaller doses at longer intervals may be tried.

Pronestyl may be tried. If digitalis is judged to be the cause of the auricular fibrillation potassium chloride may be helpful; it may be given in enteric coated tablets giving one to two grams two to four times per day.

AURICULAR FLUTTER

Paroxysmal auricular flutter usually occurs in patients with organic heart disease. The electrocardiogram is diagnostic. The ventricular rhythm is usually regular and the rate varies from 125 to 180; often it is 160, and a fixed ventricular rate of 160 is very apt to be associated with auricular flutter. The ventricular rate may vary quickly and the rhythm may change quickly, due to changing degrees of auricular-ventricular block. Carotid sinus pressure may cause a sudden change in the ventricular rate; it may drop from 160 to 80, that is, exactly doubling the block and then the rate may suddenly return to 160. In auricular tachycardia the rate may drop from, say 200, down to 70 and remain normal.

The accepted treatment of auricular flutter is the use of digitalis which often will convert auricular flutter to auricular fibrillation and then the rhythm will become normal after the drug is discontinued. Complete digitalization is often necessary if satisfactory results are to be obtained.

If the digitalis fails quinidine may be tried. If a 4:1 block occurs with a rate of around 80 it is safe to just observe the patient for years.

VENTRICULAR TACHYCARDIA

Ventricular tachycardia is usually indicative of severe organic heart disease. The onset is usually sudden. The rhythm is practically regular, but may not be absolutely so. The rate varies around 180 to 200, usually nearer 200, and the rate is not changed by position, et cetera. Before starting definitive treatment, an exact electrocardiographic diagnosis must be established, for whereas digitalis is usually indicated in auricular or nodal tachycardia, digitalis is contraindicated in ventricular tachycardia. Digitalis often causes ventricular premature contractions and if digitalis were discontinued in these cases when its toxicity first became manifest there would be less frequent ventricular tachycardia.

Quinidine still probably deserves the first place in treatment of ventricular tachycardia. It can be given orally as discussed above; in case of lack of response the dosage may be carefully stepped up to grains 6, or even grains 9, every two hours. However, if the tachycardia persists, or if the patient becomes worse, I would use procaine amide (pronestyl); this is a direct myocardial depressant. The oral route, giving 500 milligrams every three to four hours, may be tried. However, if the attack persists for over three to four hours, I would switch to the intravenous route. This must be given very carefully by the attending physician with a nurse or interne recording the blood pressure continuously and at the same time taking a continuous electrocardiogram. The pronestyl is injected at the rate of 100 milligrams, or 1 c.c., per minute—no faster, and the whole of 10 c.c.'s may be given in ten minutes if the attack does not stop, or if there are no untoward reactions. Injection should be stopped at once when the rate slows.

I have used pronestyl intravenously in about twenty cases of ventricular tachycardia and in no instance has it failed to stop the attack.

Quinidine, intramuscularly or intravenously, has been used. If the patient is unable to swallow and if pronestyl fails, quinidine is now available for intravenous use in special ampules. It should be given with great caution and slowly; do not give over 0.1 gram every three minutes and not more than 1 gram for the total dose. Potassium chloride has been of help in cases due to digitalis toxicity. This may be given in enteric coated tablets, giving 1 to 2 grams two to four times per day.

ACUTE LEFT VENTRICULAR FAILURE

Paroxysmal nocturnal orthopnea, cardiac asthma and acute pulmonary edema represent progressive stages of acute left ventricular failure. This is brought about by a sudden increase in the pulmonary congestion as a result of a sudden increase of inflow from the stronger right ventricle and the weakened left ventricle is unable to respond. The clinical picture needs no description here.

The therapeutic measures which we use in these cases of acute left ventricular failure fall into two groups. First, measures which help to cut down the increased flow such as sitting position, immediate use of oxygen, and immediate use of large doses of morphine which diminish the labored breathing, calm the patient and tend to diminish venous return. Second, measures which tend to diminish the volume of circulating blood and hence cut down the inflow load; such measures include mercurial diuretics intravenously, rapid venesection and "bloodless phlebotomy" with use of alternating tourniquets on three extremities.

When a patient is seen with cardiac asthma, the first thing to do is to get the patient up on the side of the bed or in a chair; this will often cause relief. If not, then I think morphine sulphate, grains 1/4, and atropine sulphate, grains 1/100, may be given by hypodermic and often there is quick relief. Aminophyllin may be given intravenously or by mouth or by suppository. Since the occurrence of cardiac asthma is evidence of left ventricular failure, I believe these patients should be digitalized and kept on a maintenance dose.

If the patient is seen in acute pulmonary edema or progresses to acute pulmonary edema, then certainly morphine sulphate should be given intramuscularly at once, or if the pressure is low and the patient is in shock it may be given intravenously. I prefer atropine with morphine.

If oxygen is available it should be started at once, using the emergency mask and then switching to nasal oxygen or the tent. Intravenous aminophyllin, grains 7½, should be given at once but administered slowly. Then if the patient has not been on digitalis, some form of quick acting digitalis should be given. I prefer cedilanid given intravenously in a full 1.6 milligram dose. Strophanthin K or Strophanthin G (Quabin) milligrams 0.25 intravenously may be used. In either case the patient should be digitalized immediately after the acute attack, the rapidity and method of digitalization depending upon the progress of the individual case. If one can be sure that the patient has not been on any digitalis, I believe it is rational to give digitoxin, milligrams 0.4, orally if possible; if not, intramuscularly as soon as the lanatoside C has been given, and then repeat this every four hours for two more doses. The reason for this is that the effects of the rapidly excreted lanatoside C will soon wear off and the digitoxin can begin to take effect before this happens.

I think it is wise to use one of the mercurial diuretics intravenously, and I, personally, give mercuzanthine, 2 c.c.s. intravenously, as soon as the digitalis has been given. So called bloodless phlebotomy by use of tourniquets may be of help. The tourniquets are placed on three extremities using sufficient pressure to occlude veins, but not arteries. They are rotated every fifteen to twenty minutes. If the patient does not improve in thirty to forty minutes, and if there is no evidence of anemia, 500 to 800 c.c.s. of blood should be withdrawn from a vein quickly and the result may prove dramatic.

Just a word about angina pectoris or paroxysmal coronary insufficiency. The treatment, of course, is nitroglycerine or at times amyl nitrite for the immediate episode. Prevention of attacks cannot be taken up here.

The most important thing in treating coronary occlusion with myocardial infarction is first to relieve the pain. If the pain is quite mild, demerol, 50 to 100 milligrams, may be given hypodermically. However, many cases require morphine sulphate, grains 1/4, and again, I use atropine sulphate, grains 1/150. If this does not relieve the pain in twenty minutes, or if the pain seems to be getting worse, then the same dose may be repeated and occasionally it may be necessary to give morphine sulphate intravenously. I have found that hyoscine, grains 1/200, morphine, grains 1/8, and cactus, grains 1/120, (H.M.C. mild), often relieve pain when morphine sulphate and atropine fail, or at times if the patient has had morphine sulphate, grains 1/4, I might give hyoscine hydrobromide, grains 1/200 to grains 1/100. Oxygen by emergency mask or by tent should be given, certainly in all patients who continue to have pain and in fact, I belive it is wise to give it in practically all cases. Intravenous aminophyllin, grains 7-1/2, often helps to relieve pain and is certainly indicated in patients who show any tendency toward left sided failure and cardiac asthma. Some doctors use quinidine routinely in cases of myocardial infarction—I don't believe this is necessary; however, if any irregularity of the heart develops, such as premature contractions, I would use quinidine; so, also if digitalis is to be given to that particular patient. The ectopic tachycardia should be treated as previously discussed. Some time ago it was considered unwise and dangerous to give digitalis to patients who had had an acute myocardial infarction. I believe this opinion has changed and if such a patient begins to have failure, and if this is not relieved immediately by a salt free diet and mercurial diuretics, it seems wise to me to digitalize the patient. I believe it is

wise to give quinidine as noted, and unless the situation is urgent, rapid methods of digitalization need not be used.

Morphine is the drug of choice for relief of severe pain of coronary occlusion, but it has certain untoward side effects at times, such as nausea and vomiting, constipation, distention and depression of the renal function. Therefore, after the initial dose, or as soon as possible, it may be wise in certain cases to switch to demerol, 50 to 100 milligrams. Dilaudid, grains 1/12 to 1/24, is a good drug and Pantapon is liked by some.

The most serious frequent complication of coronary occlusion is shock. This shock is due to a sudden failure of the heart to pump blood into the tissues. It is a fall in cardiac output and is not due to blood loss or to decrease in venous return. This so called cardiogenic shock results from, in part, myocardial weakness connected with the infarction. However, I feel this is not the sole cause and there are certain reflexes which are poorly understood, but which nevertheless, play an important part in this phenomenon. This shock may occur suddenly, or there may be a drop of blood pressure over a period of several hours until it gets to 80 or below, systolic. Theoretically, transfusions or intravenous fluids are not indicated, and in fact, may lead to further increase in venous pressure and congestive failure. Actually, however, this danger of inducing failure is not so great, as has recently been proven. Intra-arterial infusions have been used, but I have not had personal experience with these. Neosynephrine in doses of 3 to 5 milligrams intramuscularly may be tried and repeated every two to three hours. Masters and Griffith have used ACTH and Cortisone, but without good results so far. At the present time I believe the best treatment for this type of shock is the use of Nor-epinephrine; Sampson et al and Griffiths et al reported good results with this procedure. The technique is as follows: The agent is diluted in 5 per cent glucose or Ringers solution. The initial dilution is 4 milligrams of the bitartrate monohydrate (levophed) per liter. This is administered intravenously at rates varying from 4 to 80 drops (0.001 milligrams to 0.02 milligrams) per minute as necessary to maintain the blood pressure at appropriate levels. The concentration is increased to 8, 12 and even 16 milligrams per liter when adequate response is not obtained at lesser concentrations and to restrict parenteral fluid intake. Withdrawal is accomplished very gradually by decreasing the rate of infusion and often the concentration. Therapy is continued as long as necessary. The important thing in treatment of shock is time; if the blood pressure of a previously normotensive drops to 100 systolic or below, or if a hypertensive drops to 110 systolic or below and does not start back up in two hours, treatment should be started.

It is our practice to use anticoagulant treatment in all hospitalized cases of definite acute myocardial infarction unless there is definite contraindication. Anticoagulant treatment should be carried out only when one has the help of competent laboratory facilities and the treatment must be under very careful supervision. We are aware that certain investigators, such as Russek et al., claim that they can establish "good risk" cases. However, we feel that there is a very reasonable doubt that one can so classify cases of myocardial infarction or can predict which cases may change quickly from "good risk" to "bad risk" cases.

COMPARISON OF CASES

A survey of 107 cases of myocardial infarction as determined by the clinical and electrocardiographic findings were studied. This survey encompassed three and one half years, from January 1947 to July 1951, and represents private cases seen by me at the Johnston-Willis Hospital. The cases were divided as to those patients not receiving dicumarol and those who did receive dicumarol. If the patients expired within three days of admission the case was excluded. There were 27 patients not treated who served as a modified control and 10 of these died. There were 80 patients treated with dicumarol and nine of these died.

The difference in percentage of mortality was so striking that the cases were restudied to determine if any other factors were involved that might have influenced the mortality rate. No significant variations could be found. However, we wish to state that we did not attempt to run a control group, such as could have been obtained by selecting alternate cases. We apparently tended to increase the number of cases on dicumarol each year. The causes of death in both groups also appeared similar. The overall mortality for those patients who did not receive dicumarol was 37%, whereas the mortality rate for those receiving dicumarol was only 11%.

We realize that this difference is considerably greater than that found by others, possibly due to the small number of cases. However, it does confirm rather strikingly that anticoagulant therapy in cases of myocardial infarction is a definite adjunct in the treatment of these cases.

Series II: Cases seen in private hospital practice with acute myocardial infarction and treated with anticoagulants during 1955: Eighty-six cases were at first placed in the above classification. However, after applying criteria that were so rigid there could be no reasonable doubt that each case had an acute myocardial infarction, the number was cut down to 64 cases.

Of these 64 cases, seven or 10% died within forty-eight hours of admission to the hospital and were not included in the further study or mortality rate, as it was felt they died so quickly that dicumarol could not have had any effect upon the outcome.

Sex and Age: Males predominated, as would be expected, there being 60 males and 26 females. The ages ranged from 38 to 84 with an average age at the time of this acute infarction being 67. The average age for the patient with the second or more infarction was 60 to 70, and the average age for those having the first known or recognized infarction was 67.

Seven cases of the 57 who lived longer than forty-eight hours and were on dicumarol therapy died; four of these seven who died had had no infarction, insofar as we could determine, prior to this current episode; three cases had at least one or more previous infarctions. The above mortality rate is 12%. One patient had a pulmonary infarction while on dicumarol; it did not cause death. There were no instances of significant bleeding, nor were there instances of complicating thromboembolic phenomena. These 57 cases were continued on dicumarol throughout their hospitalization. The 50 who survived remained in the hospital on an average of four weeks.

It is interesting to note that of the 64 cases admitted with acute myocardial infarction twenty-one had at least one previous myocardial infarction prior to the episode for which they were admitted. Of the seven cases who died within the first forty-eight hours three had suffered one or more infarctions previous to their current infarction.

Just a few words about syncope which occurs in many conditions and usually in patients who do not have organic heart disease. Neurogenic or vaso depressor syncope is the most common and is produced by a reflex peripheral vasodilatation and may be brought on by fright, pain, emotional upset, et cetera. The usual treatment is simply to get the patient's head below his body. If clonic twitches occur adrenalin .5 c.c. 1:1000 solution hypodermically may be needed.

A hypersensitive carotid sinus may be the cause of fainting in some patients. If the diagnosis can be established the patient should be warned against things which will stimulate the carotid sinus, tight collars, et cetera, and it is reasonable to try ephedrine sulphate, grains 1/2, three times a day, or paredrine, 60 milligrams, three times a day, or atropine sulphate, grains 1/200, three times a day.

Postural hypotension at times causes syncope and the treatment depends on the cause if it can be found. Again ephedrine, paredrine and atropine may help.

Hypoglycemia may also cause syncope and the treatment depends on the cause of the hypoglycemia.

Emergency treatment may be required during the acute stage of rheumatic fever and rheumatic pancarditis, because of the occurrence of pericarditis, congestive failure and arrhythmia. The latter two have been dealt with in general. If the patient with pericarditis develops an effusion enough to cause a tamponade, then a pericardial paracentesis should be done at once, and it may be life saving. Apparently ACTH and cortisone are useful in the treatment of the acute severe stage of rheumatic fever. The exact mode of action is not known and the question as to whether or not the ultimate progress and course of the disease is altered, has not, in my opinion, been proven. Nevertheless, since these drugs apparently can tide the patient over the very acute phase, their use is worthwhile. ACTH may be given somewhat as follows: 25 milligrams every six hours for six days, then a daily dose of 60 milligrams for seven days, then 40 milligrams for two or three weeks. Cortisone in a single daily dose of 200 milligrams may be given intramuscularly, or if it can be given orally it is more effective and can be given 75 to 100 milligrams every six hours for about the same length of time.

Complete heart block with sudden failure of idioventricular pacemaker and asystole is a common cause of Stokes-Adams syndrome, although a change from one rhythm to another may cause asystole and Stokes-Adams. Adrenalin is the immediate treatment of choice; in extreme cases in shock it may be given intravenously or directly into the heart. In the usual case, 1/2 to 1 c.c. of 1:1000 solution of adrenalin should be given hypodermically. This may be repeated as necessary if the attacks recur and are severe.

Finally, hypertensive encephalopathy and hypertensive crises may occur in the course of essential

hypertension—malignant phase usually—or in acute nephritis or in pheochromocytoma.

At the present the best method of treatment, according to Herbert Langford, is Reserpine, milligrams 2, intramuscularly, then watch the blood pressure carefully, and if a satisfactory lowering of blood pressure has not occurred, then Reserpine, milligrams 3, intramuscularly, may be tried in three to four hours, and if in another three to four hours, the pressure still does not come down, 5 milligrams may be given every four to six hours. If the crisis is proved to be due to a pheochromocytoma the tumor should be removed, of course, if this is possible.

Acknowledgment

I wish to express my gratitude to Dr. Louis Calisch of Danville, Va., and Dr. William Rusher of Crewe, Va., for their help in securing the data concerning the use of anticoagulants in myocardial infarction.

Professional Building
Richmond, Virginia

Pastoral Counseling Service

A medical center outpatient service for persons needing religious counseling has been described by two North Carolina ministers.

Richard K. Young, Th.D., and Benjamin S. Patrick, Th.M., Winston-Salem, reported on the outpatient pastoral counseling service at North Carolina Baptist Hospital in the September 6 Journal of the American Medical Association.

It is one more example of the growing cooperation between medicine and religion in helping persons who are ill or who need help in solving their daily problems.

Outpatient counseling at North Carolina Baptist Hospital resulted from a program of intensive pastoral work with inpatients. Many patients requested that the chaplain talk with members of their families. Many patients themselves returned for counseling after their discharge from the hospital, and eventually local pastors began sending their patients to the hospital chaplain.

In 1953 a program of outpatient counseling was set up. In that year there were 1,621 visits. By 1957 the number has grown to 3,208, and people were coming to the service from three states.

The staff consists of 13 men, all ministers. Six are permanent members and seven are fellows or interns. "These counselors function in their roles of ministers—but ministers with special training and experience in understanding human behavior."

They deal with persons having typical problems of adjustment and make no attempt to handle cases of mental illness. When such patients appear, they are referred to the psychiatric clinic. Often such referrals are more easily made by chaplain-counselors than by local pastors.

Many problems are brought to the clinic. More than a third of the persons seen last year received marital counseling and many received "growth counseling"—growth in self-understanding.

The department looks on counseling as a religious process in which the individual is helped to realize more nearly the full potentials of his own personality. The outstanding advantage of a pastoral counseling service in a medical center is the availability of medical resources. If patients need medical care, they are referred to the medical departments. The medical staff and the chaplains realize that both play a part in the comprehensive care of the patient. Another advantage is that counselors can be trained within the framework of interprofessional relationships. The medical and religious groups work closely together, exchanging information and learning from each other.

A promising development that has grown out of the North Carolina program is the opportunity for research. The hospital has employed a clinically trained minister to do research in pastoral care. As far as the authors know, this is the first time that a medical center has employed such a person.

The Medical Treatment of Hyperthyroidism

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THE THREE METHODS presently available for the satisfactory control of hyperthyroidism are: (1) subtotal thyroidectomy, (2) administration of antithyroid drugs, (3) the use of radioactive iodine. This discussion will be confined to the non-surgical methods of treatment and the purpose of this report is to discuss briefly thyroid physiology, and the method of action, adverse reactions, and indications for use of the more important antithyroid drugs and of radioactive iodine.

PHYSIOLOGY OF THE THYROID GLAND

The chief function of the thyroid gland is to synthesize, store, and release thyroxin as needed.[1,2,3] The two essential compounds required for thyroxin synthesis are tyrosine, a readily available amino acid, and iodine, the supply of which depends on its intake, entering the body chiefly in water and food.[4] Iodine is rapidly absorbed in the gastrointestinal tract and transported in the blood as iodide.[5] The thyroid gland has a great affinity for iodide, and traps it in concentrations up to 25 times that of the blood by some as yet unknown mechanism.[4,5,6] The oxidation of iodide to iodine probably takes place by means of hydrogen peroxide in the presence of peroxidase.[4,5] Elemental iodine is almost instantaneously organically bound to tyrosine in the 3,5 position of the tyrosine ring. Two molecules of the product, 3,5, diiodotyrosine are condensed to form thyroxin, which is protein-bound as thyroglobulin, the main constituent of the colloid material in the lumen of the acinus.[5,7] (Figure I.) Proteolytic enzymes apparently break down colloid and release thyroxin thus allowing its release into the blood.[8] The gradient of free thyroxin in the thyroid and the serum thyroxin is about 100:1,[3] thus favoring passage of thyroxin into the blood.

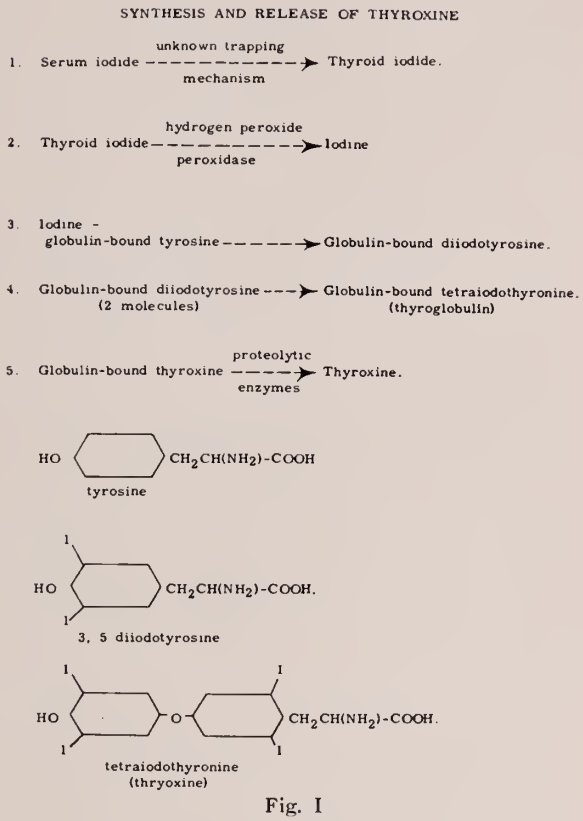


Fig. I

ANTITHYROID DRUGS

All antithyroid compounds studied have been shown to act by: (1) inhibiting the trapping of iodide by the thyroid gland, (2) inhibiting the organic binding of iodine or a combination of 1 and 2.

Thiocyanate and perchlorate and the other monovalent anions (chlorate, hypochlorate, periodate, iodate, biiodate, and nitrate) have been shown to inhibit iodide trapping by the thyroid, and to cause the purging of iodide from the gland.[6,9] By interfering with the accumulation of iodide by the gland, they cause a deficiency of thyroxin synthesis, but this effect can be modified or abolished by large doses of iodide because when plasma iodide content is markedly increased, enough iodide diffuses to the thyroid gland via the circulation to synthesize thyroxin.[1]

The compounds exerting the most pronounced antithyroid action, the thiocarbamides, (thiourea, thiouracil, etc.) do not markedly interfere with iodide trapping.[10] The thiocarbamides, imidazoles,

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Table 1

Incidence of Serious Toxic Effects and Death During the Clinical Use of Antithyroid Agents

Drug	Total Cases	% of Total Cases		
		Agranulocytosis	Fever	Death
Thiouracil	2490	1.07	2.37	0.24
Methylthiouracil	1116	0.54	7.0	0.00
Propylthiouracil	2491	0.44	0.28	0.00
Methylmercaptoimidazole	831	0.12	0.48	0.00
Thiourea	525	0.19	4.57	0.00
Thiobarbital	58	5.17	17.2	3.45
Aminothiazole	179	0.0	8.4	0.00
Iodothiouracil	252	0.0	1.19	0.00
Carbethoxymethylglyoxaline	263	0.76	0.0	0.00

and the aminobenzenes (sulfonamides, paraminosalicylic acid) interfere mainly with the organic binding of iodine.[2,11] In the case of the thiouracils the mechanism by which it blocks the iodination of tyrosine is thought to be by the inhibition of peroxidase.[10,11]

Propylthiouracil is a safe and effective compound for the control of hyperthyrodism, if used in adequate doses.[12,13] Its action, as discussed before, is to inhibit the organic binding of iodine. The average dose in thyrotoxicosis is 300 mg. a day in equally divided doses at eight hour intervals. Euthyroidism is considered to be obtained when the BMR returns to normal with a corresponding change in clinical status.

Methimazole (Tapazole) is used initially on an average dose of 30 to 45 mg. daily in equally divided doses at eight hour intervals. Its action, that of an enzyme inhibitor, is similar to that of the thiouracils.[14] Neomercazole is similar to Methimazole in structure and response to the two compounds is similar in equivalent doses.

There is considerable variation in the rate of response to treatment in subjects with hyperthyroidism.[12,15] Adequate response is delayed where the dosage schedule is not consistent, in the presence of marked enlargement or nodularity of the gland, in severe thyrotoxicosis, and when recent iodine therapy has been used.[16] Remissions in mild hyperthyroidism, under treatment with the more commonly used antithyroid agents, may be expected in 12 to 14 weeks. Nodular goiters require much longer intervals for attaining euthyroidism than do those with diffuse hyperplasia, and several months may be required in cases of large nodular goiters. In a series of 203 hyperthyroid patients,[12] the rate of response to propylthiouracil was variable, but on the average, the basal metabolic rate was within normal range within approximately 90 to 100 days.

Antithyroid therapy is usually continued until at least six months of complete freedom from clinical and laboratory evidence of hyperthyroidism has been achieved.[17] Then, to determine whether permanent remission has resulted, the program is interrupted. If recurrence of toxicity develops, it usually occurs within two months. Six months of well-being are required before the possibility of future relapse becomes unlikely. A decrease in the size of the thyroid gland during treatment is the only factor indicative of a favorable prognosis.[18] A second or even third course of therapy may be given if relapse occurs, but they yield lower remission rates.[17] However, they may increase the total remission rate. Prolonged remission rates under proper therapy are estimated at from 60 to 70%.[12,18,19] Factors that tend to favor persistent remissions are female sex, small goiter, and mild thyrotoxicosis.[20]

It has been our policy to administer iodine in the form of Lugol's solution or saturated solution of potassium iodide in combination with the antithyroid drugs. This is a necessity if the patient is being prepared for thyroid surgery but is optional if the antithyroid drugs are being used as definitive therapy.

The above discussion has been concerned mainly with the use of the antithyroid drugs as definitive therapy. They probably have their main use in preparing patients for sub-total thyroidectomy. It has been our custom to render most patients in the younger age group with thyrotoxicosis euthyroid with the antithyroid drugs and then decide whether to have surgery performed or to continue the antithyroid medication as outlined above.

Toxic reactions attributed to antithyroid drugs have been mainly hematological, dermatological, neurotoxic, and febrile.[12,14,15,17,21,22] In one series of 218 patients treated with propylthiouracil, reactions amounted to 2.5% and withdrawal of the drug was only necessary in three patients.[21] In a survey of 1,046 patients treated with neomercazole, there were only 0.5% major and 1.5% minor toxic reactions.[22]

In the usually employed dosages, the toxicity of propylthiouracil, methimazole, and neomercazole is low (Table I). According to Burrell and Fraser, the incidence of major toxic reactions for propylthiouracil is 0.9%, for methimazole is 1.45% and for neomercazole is 0.5%.[22]

RADIOACTIVE IODINE

Radioactive iodine, I-131, has been established to be of definite therapeutic value in hyperthyroidism. Since 1942, when Hertz and Roberts[23] and Hamilton

and Lawrence[24] reported their results of patients successfully treated for hyperthyroidism with radioactive iodine, there have appeared numerous reports on large series of patients so treated.[25,26,27,28,29,30,31,32,33,34] While various investigators differ somewhat in dosage the basic approach is the same. An initial calculated dose is given, with additional doses to be given as dictated by the course of the patient.

The half-life of I-131 is only 8 days, and its radiation is largely in the form of beta rays with a tissue penetration of about 2 mm., minimizing tissue damage outside the thyroid. Radioactive iodine behaves, physiologically, like iodine and it is, therefore, taken up by the thyroid and incorporated into thyroxin in the same way. In the hyperthyroid patient it is estimated that I-131 is concentrated in the thyroid gland in amounts 10,000 times greater than in the blood.[21] The cells of the thyroid gland concentrate radioiodine and form thyroid hormone and in so doing they are inactivated or destroyed by the radiation they receive. Obviously more damage is done to the "over active" cells and the normally functioning cells will be spared.

The type of patient that we have selected for treatment with radioactive iodine have been those who present an increased surgical risk and include mainly recurrent thyrotoxicosis, thyrotoxicosis complicated by heart disease ("thyrocardiac"), and patients in the older age group.[33]

In general the results of treatment of hyperthyroidism with radioiodine have been excellent. Table II

Table II

Results of I-131 Treatment of Hyperthyroidism

Authors	Year Reported	Number of Patients	Percentage Remission
Werner et al	1949	103	92
Soley et al	1949	46	93
Gordon and Albright	1950	120	100
Feitelberg et al	1950	184	99
Clark et al	1952	384	100
McCullagh	1952	642	100
Crispell et al	1953	58	93.1
Chapman and Maloof	1955	528	95
Blomfield et al	1955	140	96
Beierwaltes et al	1956	330	74.5
MacGregor	1957	150	98
		Average %	94.6

compares the results obtained by several authors with this type of treatment. The average percentage remission was 94.6%. These results are better than those reported for the treatment of hyperthyroidism with antithyroid drugs.[18,19] They also compare favorably with results reported with the treatment of hyperthyroidism with antithyroid drugs followed by subtotal thyroidectomy.[35]

The main advantages of radioiodine treatment are its ease of administration, hospitalization is not required, post-treatment vocal cord paralysis or hypoparathyroidism have not been reported, drug reactions are eliminated, and the risk of surgery, especially in the presence of heart disease, is eliminated. No reports of malignancy developing in patients who have received radioiodine have been noted in the 17 years of use of radioiodine in the treatment of hyperthyroidism. However, it is our policy to restrict the use of radioiodine therapy to those over 40 years of age because of the possibility of malignancy developing in these patients in years to come. The incidence of hypothyroidism following radioiodine therapy has been about the same as for surgery.[21]

SUMMARY AND CONCLUSIONS

The antithyroid drugs, propylthiouracil, methimazole, and more recently neomercazole, are effective measures for the treatment of hyperthyroidism. They are particularly useful in young people, with relatively small goiters and in all patients where the surgical risk is great. They are also useful in the preoperative preparation of patients who are to be treated by sub-total thyroidectomy. Toxic reactions are relatively uncommon and usually self-limited. Radioiodine is an effective drug for the treatment of hyperthyrodism and is especially valuable in recurrent hyperthyroidism and in the "thyrocardiac".

Bibliography

1. Pitt-Rivers, R.: Mode of Action of Antithyroid Compounds. Physiol. Rev. 30: 194, April, 1950.
2. Dobyns, B. M.: Physiologic Concepts in the Diagnosis and Treatment of Graves' Disease. Am. J. Med. 20: 684, May, 1956.
3. Leblond, C. P., and Gross, J.: The Mechanism of the Secretion of Thyroid Hormone. J. Clin. Endocrinol. 9: 149, February, 1949.
4. Berson, S. P.: Pathways of Iodine Metabolism. Am. J. Med. 20: 653, May, 1956.
5. Riggs, D. S.: Quantitative Aspects of Iodine Metabolism in Man. Pharm. Rev. 4: 284, September, 1952.
6. Vanderlaan, J. E., and Vanderlaan, W. P.: The Iodide Concentrating Mechanism of the Rat Thyroid and its Inhibition by Thiocyanate. Endocrinology 40: 403, June, 1947.
7. Albert, A.: Thyroid Gland. Ann. Rev. Physiol. 14: 481, 1952.
8. DeRobertis, E.: Cytological and Cytochemical Bases of Thyroid Function. Ann. N. Y. Academy of Sciences 50: 317, January, 1949.

9. Wyngaarden, J. B., Wright, B. M., and Ways, Peter: The Effect of Certain Anions Upon the Accumulation and Retention of Iodide by the Thyroid Gland. Endocrinology, 50: 537, May, 1952.

10. Astwood, E. B.: Mechanisms of Action of Various Antithyroid Compounds. Ann. N. Y. Academy of Sciences, 50: 419, January, 1949.

11. Astwood, B. B.: Treatment of Hyperthyroidism with Antithyroid Compounds. Adv. in Int. Med. 3: 237, 1949.

12. Wing, E. S., and Asper, S. P.: Observations on the Use of Propylthiouracil in Hyperthyroidism with Especial Reference to Long Term Treatment. Bull. Johns Hopkins Hosp. 90: 201, March, 1952.

13. McCullagh, E. P., Ryan, E. J., and Schneider, R. W.: Propylthiouracil in Treatment of Hyperthyroidism. Cleveland Cl. Quart. 13: 232, October, 1946.

14. Fraser, T. R., Garrod, O., Hanno, M. G. W., and Jadresic, A.: Antithyroid Activity and Toxicity of Mercazole and Neomercazole. J. Clin. Endocrinol. 14: 1230, October, 1954.

15. Astwood, E. B., and Vanderlaan, W. P.: Treatment of Hyperthyroidism with Propylthiouracil. Ann. Int. Med. 25: 813, November, 1946.

16. Williams, R. H.: Thiouracil Treatment of Thyrotoxicosis, I. The Results of Prolonged Treatment. J. Clin. Endocrinol. 6: 1, January, 1946.

17. Vanderlaan, W. P., and Storrie, V. M.: A Survey of the Factors Controlling Thyroid Function with Especial Reference to Newer Views on Antithyroid Substances. Pharm. Rev. 7: 301, September, 1955.

18. Solomon, D. H., Beck, J. C., Vanderlaan, W. P., and Astwood, E. B.: Prognosis of Hyperthyroidism Treated by Antithyroid Drugs. J.A.M.A. 152: 201, May, 1953.

19. McCullagh, E. P., and Cassidy, C. E.: Propylthiouracil: 4-6 Year Follow-Up of Selected Patients with Graves' Disease. J. Clin. Endocrinol. 13: 1507, December, 1953.

20. Williams, R. H., Asper, S. P., Rogers, W. F., Myers, J. D., and Lloyd, C. W.: Persistence of Remissions of Thyrotoxicosis after Cessation of Thiouracil Therapy. New England J. Med. 236: 737, May, 1947.

21. Crile, G., and McCullagh, E. P.: The Treatment of Hyperthyroidism. Ann. Surg. 134: 18, July, 1951.

22. Burrell, C. D., and Fraser, R.: The Low Toxicity of Carbimazole. Brit. M. J. 1: 1453, June, 1956.

23. Hertz, S., and Roberts, A.: Application of Radioactive Iodine in Therapy of Graves' Disease. J. Clin. Investigation 21: 624, September, 1942.

24. Hamilton, J. G., and Lawrence, J. H.: Recent Clinical Developments in the Therapeutic Application of Radiophosphorus and Radioiodine. J. Clin. Investigation 21: 624, September, 1942.

25. Werner, S. C., Quimby, E. H., and Schmidt, C.: Radioactive Iodine, I-131, in the Treatment of Hyperthyroidism. Am. J. Med. 7: 731, December, 1949.

26. Gordon, E. S., and Albright, E. C.: Treatment of Thyrotoxicosis with Radioactive Iodine. J.A.M.A. 143: 1129, July, 1950.

27. Beierwaltes, W. H., and Johnson, P. C.: Hyperthyroidism Treated with Radioiodine. Arch. Int. Med. 97: 393, April, 1956.

28. Clark, D. E., Rule, J. H., Trippel, O. H., and Cofrin, D. A.: Five Year Experience with Radioactive Iodine in Treatment of Hyperthyroidism. J.A.M.A. 150: 1269, November, 1952.

29. Feitelberg, S., Kaunitz, P. S., Silver, S., Simion, N., Wasserman, L. R., and Yohalem, S. B.: Hyperthyroidism, Treated with Radioactive Iodine. Arch. Int. Med. 85: 471, March, 1950.

30. Soley, M. H., Miller, E. R., and Foreman, N.: Graves' Disease: Treatment with Radioiodine. I-131, J. Clin. Endocrinol. 9: 29, January, 1949.

31. McCullagh, E. P.: Radioactive Iodine in the Treatment of Hyperthyroidism. Ann. Int. Med. 37: 739, October, 1952.

32. Chapman, E. M., and Maloof, F.: The Use of Radioactive Iodine in the Diagnosis and Treatment of Hyperthyroidism: Ten Years' Experience. Medicine 34: 261, September, 1955.

33. Crispell, K. R., Gahagen, R. B., and Parson, W.: Radioactive Iodine in the Treatment of Hyperthyroidism. Virginia M. Monthly 80: 652, December, 1953.

34. Blomfield, G. W., Jones, J. C., Miller, H., Macgregor, A. G., Wayne, E. J., and Weetch, R. S.: Treatment of Thyrotoxicosis with Radioactive Iodine. Brit. M. J. 2: 1223, November, 1955.

35. Bartels, E. C.: Hyperthyroidism: An Evaluation of Treatment with Antithyroid Drugs Followed by Subtotal Thyroidectomy. Ann. Int. Med. 37: 1123, December, 1952.

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Surgical Approach to Spontaneous Pneumothorax

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SPONTANEOUS PNEUMOTHORAX is a common benign disease entity of young adults. It occurs in males with a 5-1 ratio and has an overall recurrence rate of 25 per cent.[1] "Pneumothorax simplex" may well become a chronic and expensive illness since the recurrence rate is high, repeated hospitalization with loss of income, and the possibility of complications such as hemothorax or pleural soilage following multiple thoracenteses are a constant threat to the patient with a history of two or more proven episodes. Bilateral pneumothorax occurs not infrequently, or in ten to twelve per cent of patients with spontaneous pneumothorax, and this is attended with a 35 to 50 per cent mortality.[2] It becomes apparent to one analyzing these figures that a sensible approach is early, vigorous treatment. Multiple thoracenteses are not satisfactory since the lung becomes only partially expanded and a visceral-parietal union or symphysis cannot occur.

SIMPLE SPONTANEOUS PNEUMOTHORAX

The "simple" type of spontaneous pneumothorax usually occurs for the first time with a small air space of less than 25 per cent. In certain instances simple needle aspiration of this space may suffice, but in the majority of cases, a catheter drainage with water seal is preferable. Intercostal drainage may be necessary for only several days after which time the lung will have expanded and the chest tube become sealed. Removal of the catheter can safely be done at this time. Broad-spectrum antibiotics should be given during the period the tube is in the pleural cavity. Bilateral cases of pneumothorax should invariably have bilateral catheter drainage.

Hemothorax patients require special consideration. Streptokinase® and Streptodornase® (Varidase) are administered intrapleurally to aid in the removal of clotted blood. This should be given within 72 hours of the time bleeding has stopped, or prior to organization of the clotted blood. Frequently, the pleural reaction caused by the Varidase will result in a visceral and parietal symphysis if, at the same time, adequate lung expansion is maintained, by catheter suction. In these patients having hemothorax a thickened peel of pleura is usually found regardless of the use of Varidase. Decortication is indicated where a "peel" is considered to be significantly thick to cause future decrease in pulmonary function and fibrothorax. Decortication should be performed within four to six weeks of the time of hemothorax if the pleural peel is to be easily removed.

All patients having spontaneous pneumorthorax require skin testing and sputum studies for evidence of tuberculous infection. At one time, almost all spontaneous pneumothorax episodes were attributed to tuberculosis; however, this is not actually borne out by present figures, and more cases of spontaneous pneumothorax occur as a result of subpleural bleb ruptures than tuberculosis.[3]

Mediastinal pneumothorax may also occur, although infrequently, following spontaneous pneumothorax. This complication is easily and quickly diagnosed by the symptoms of rapid spread of subcutaneous air over the upper chest, neck and face. There is a crackling sound (Hamman's sign) characteristically heard by both patient and physician. Diagnosis can be confirmed by chest x-ray which may or may not reveal associated pneumothorax, but which will certainly show an air meniscus surrounding the pericardium, great vessels and other mediastinal structures. Severe subcutaneous emphysema can be both uncomfortable and dangerous. Mediastinal structures can actually be compressed causing tracheal deviation, extreme dyspnea, superior caval obstruction, etc. Treatment consists of intercostal catheter drainage of the existing pneumothorax which usually controls the subcutaneous emphysema. Further therapy, if indicated, consists of cervical mediastinotomy or at least the incising of the pretracheal fascia to allow escape of air. Occasionally, a tracheotomy is necessary which serves to decompress the trapped mediastinal air and to decrease dead space in the respiratory tree.

Usually no pleural fluid is present. Occasionally, however, pleural fluid forms at the base, especially if the collapse has gone unattended for several days. Also occasionally, spontaneous hemothorax occurs,

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and this is associated with the obvious complication of shock, lowered resistance, empyema, and occasionally severe bleeding.

These instances of pleural fluid or hemothorax require catheter drainage in a dependent or posterolateral position through the seventh or eighth intercostal space. Simple small air spaces without pleural fluid are best decompressed through the second or third intercostal spaces anteriorly. Following catheter drainage, there may be no further episodes of pneumothorax. However, recurrence does occur, and unfortunately appears in about 50 to 60 per cent of patients regardless of vigorous early treatment.[2] This group is called the chronic pneumothorax group. The complication rate in this latter group doubles. Tension pneumothorax, complete pneumothorax, hydropneumothorox and hemopneumothorax all occur with increased incidence in the chronically recurring pneumothorax patient.

CHRONIC PNEUMOTHORAX

The chronic type of pneumothorax bears direct relationship to the pathology which is described briefly as follows:

In the vast majority of cases, subpleural air vesicles or blebs are the offending agent. Often, these present as small thin-walled beads along the edge of the apical and posterior segments of the upper lobes.[3] Rupture of these vesicles causes sudden change in the intrapleural pressure with resultant partial collapse of lung tissue. Often the collapse itself serves to compress the walls of the blebs together, thus causing the rupture to seal by coaptation, fibrin formations, etc. Intercostal cathether drainage and lung re-expansion will then be complete and unattended with a persistent air leak. If the vesicles are multiple and large, the recurrence rate is high. Often larger air sacs or bullae exist, especially in the upper lobes, and these will give a large pneumothorax with persistent air leak. Occasionally, with long-standing pneumothorax, the visceral pleura becomes thickened thus "trapping" the lung in the collapsed state. It is presumed that, whether large or small, these vesicles are forerunners of the more diffuse process called emphysema. Chronic recurrence of pneumothorax, two or more times, simply means that multiple small subpleural vesicles exist and that repeated leakage can be expected. Often large cysts can be seen on x-ray. At any rate, an understanding of the pathology lends understanding to the following indications for exploratory thoracotomy:

1. Occurrence of two or more episodes of spontaneous pneumothorax.
2. Occurrence of one or more episodes of pneumothorax with x-ray evidence of large intrapulmonary blebs or vesicles.
3. Occurrence of one or more episodes of bilateral spontaneous pneumothorax.
4. Occurrence of one or more episodes of spontaneous pneumothorax with associated hemothorax.
5. Occurrence of one episode of spontaneous pneumothorax with failure of expansion following prolonged intercostal catheter drainage (ten or more days). This is called a "persistent air leak".

METHODS OF SURGICAL INTERVENTION

The simple intercostal catheter drainage has been described.

Several years ago, a variety of "closed" surgical procedures were used with varying success. These included thoracoscopy and lysis of adhesions as well as cauterization of the leaking area under direct thoracoscopic vision.[4] Also, chemical pleuritis has been tried with a huge number of irritating solutions and powders.[5] These have had generally poor results. Some of these substances are mentioned for condemnation and interest's sake: Tuberculin, killed bacteria, peptone, india ink, ether, formaldehyde, turpentine, talc, etc. However, failure has usually occurred for the following reasons:

1. Inadequate expansion of the lung following thoracoscopy prevented visceral and parietal contact and thus lack of symphysis.
2. Adhesions, when formed, were inadequate and stringy, and after fixation occurred at the least desirable area over the mediastinum and diaphragm.

More recently exploratory thoracotomy has been urged in the treatment of recurrent spontaneous pneumothorax. Gaensler[2] and Gebauer[6], have advocated pleurectomy for insurance against further episodes. These authors feel that following excision of the vesicle areas either by wedge, segmental resection or lobectomy, a pleurectomy is indicated. It has been our feeling that if a discrete area of blebs can be removed or if a cystic upper lobe is resected, pleurectomy is not necessary and simply adds to the procedure. However, diffuse cystic disease which cannot be locally resected, or a negative exploration revealing no obvious area of leakage should

be attended by a pleurectomy or at least "roughening" of the parietal pleura with instrumentation or sponges.

Certain cases of prolonged collapse will have a thickened visceral pleura resulting in a "trapped" lung. These cases will require a decortication, resection of localized vesicle area and a parietal pleurectomy if this is deemed necessary at the time of operation.

Postoperatively, the chest cathethers are left in place four to six days to insure adhesion formation. Attention is also directed to complete expansion of the lung and multiple endotracheal aspirations are performed if coughing is poor.

CONCLUSION

The subjects of simple spontaneous and chronic pneumothorax are discussed. Indications for exploratory thoracotomy are given and are based primarily on the important point that usually a large vesicle or series of subpleural blebs must be excised as the underlying offender in order to prevent multiple occurrences of collapse. Pleurectomy is occasionally indicated where no discrete area of pulmonary cystic change can be found. Poudrage procedures are always contraindicated and have no place in the present-day handling of spontaneous pneumothorax.

References

1. Leach, J. E.: Pneumothorax in Young Adult Males: Statistics on 126 Cases. Arch. Int. Med. 76: 264, 1945.

2. Gaensler, Edward A.: Parietal Pleurectomy for Recurrent Spontaneous Pneumothorax. Surg. Gynec. & Obst. 102: 3, 1956.

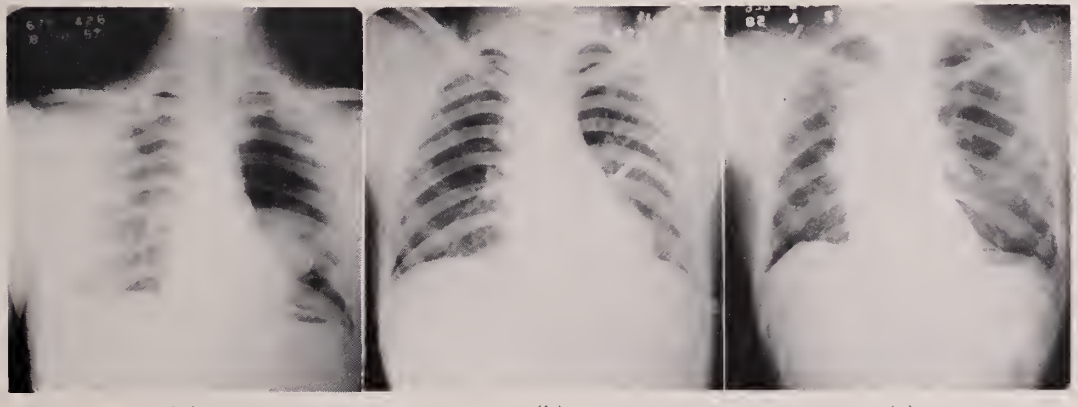
Fig. I



(a) Shows complete pneumothorax.

(b) Complete expansion following intercostal catheter drainage.

Fig. II



(a) Complete left side pneumothorax.

(b) Intercostal catheter in position.

(c) Complete expansion following intercostal drainage.

3. Crenshaw, G. L.: Etiology, Treatment and Surgical Indications of Non-Tuberculous, Non-traumatic Spontaneous Pneumothorax. Dis. Chest 17: 369, 1950.

4. Waterman, D. H.: Commenting on Crenshaw, G. L. Etiology, Treatment and Surgical Indications of Non-tuberculous, Non-traumatic Spontaneous Pneumothorax. Dis. Chest 17: 369, 1950.

5. Bethane, N.: Pleural Poudrage. J. Thoracic Surg. 4: 251-261, 1935.

6. Thomas, Paul A., Gebauer, Paul: Pleurectomy for Recurrent Spontaneous Pneumothorax. J. Thoracic Surg. 35: Jan. 1958.

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Eye Protection

Suspicions that fluorescent lighting may be injurious to the eyes are unfounded, according to a committee of the American Medical Association.

"Fluorescent lighting is not harmful to the eyes. It does not cause visual discomfort if properly installed, maintained, and used," the A.M.A. committee on industrial ophthalmology of the Council on Industrial Health said.

The commitee's findings are part of three special reports on eye protection in industrial plants which appear in the September Journal of the A.M.A.

The study also revealed that:

—Ultraviolet energy from clear blue summer sky light is several times as great per foot-candle as fluorescent light.

—Light from some fluorescent lamps resembles daylight more closely than that from tungsten-filament lamps.

—Heat is the only known physiological effect produced from infrared energy found in present-day fluorescent lighting.

—Glare may occur in any lighting system and can be solved by proper installation and use.

—Noticeable flicker is usually eliminated in modern multiple tube fluorescent installations.

The committee recommends the use of guides set forth by the American Standards Association and the Illuminating Engineering Society to achieve the desired level of illumination.

In a second report to the council dealing with chemical eye injuries, the committee said, "Water is still the most universally available, effective, and practical emergency first-aid treatment of eyes injured by chemicals."

"Published reports of research in the use of buffered neutralizing solutions have failed to show superiority of buffer instillation over proper water irrigation."

Immediate and thorough flushing of chemicals from the eyes has brought about a tremendous saving of eyesight among industrial employees.

In a discussion of eye safety equipment the committee stated that "eye disease is not caused by lenses in eye safety equipment. Substandard or improperly fitted lenses may cause annoyance and discomfort, but not disease."

Safety goggles should meet the specifications of the National Bureau of Standards.

"The examination, fitting, and maintenance of eye protective wear should be under the supervision of an eye physician."

Dr. Edmund B. Spaeth, Philadelphia, is chairman of the committee.

Psychosomatic Disorders in Children

Understanding the Language

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SINCE THE DOORS of the Child Psychiatry Clinic at our hospital were opened approximately 18 months ago there has been a constant stream of traffic consisting of parents and their children, whose behavior or symptoms were severe enough in nature that the parents sought assistance in alleviating the undesirable symptoms. Generally the symptoms may be grouped under such large categories as: (1) Personality problems arising from physical illnesses, such as diseases and injuries of the brain, and convulsive disorders. (2) Problems of behavior such as unusual eating problems, disturbances of sleep patterns, juvenile delinquency, and schizophrenia, and (3) Psychosomatic problems, such as problems relating to the various systems of the body.

The psychosomatic problems will be discussed briefly, and emphasis will be placed on the importance of understanding the language of the child or adolescent with a psychosomatic problem. The general statements are applicable equally to the personality problems and the problems of behavior. Indeed, it is not unusual to see the child with a psychosomatic problem who at the same time has some other manifestations such as the behavior problem.

Psychosomatic problems in children are not uncommon, and in addition to being made aware of it in our daily practice of medicine, it is brought to our attention in both classical literature and in the popular press.

A familiar children's story, Heidi, tells of a little girl who is forced by an unfeeling guardian to leave her beloved grandfather and his home in the mountains of Switzerland to be a companion for a wealthy invalid child in the city. Becoming increasingly homesick and lonely for familiar scenes and old friends, she loses her appetite, becomes thin and ill until she is returned again to her grandfather and her mountains.

The well known life of Elizabeth Barrett Browning is a good illustration of a psychosomatic problem. Given the convenient excuse of a temporary injury sustained when she fell from a horse at the age of 15, her father, after the death of his wife and following financial disappointments, forced his favorite and eldest daughter Elizabeth into semi-invalidism through late adolescence and early maturity in order to keep her at home with him. When at the age of 30 she met and fell in love with Robert Browning, the impetus of the strong emotions thus released enabled her to walk and to gain sufficient strength to elope with him to Florence, lead a normal social life and bear a child without injuring her so-called "delicate" health.

Another example that comes to mind occurred a few years ago among the youthful occupants of a barracks at a large Air Force Basic Training Center in New York State. It was in the middle of a long cold winter and most of the trainees were away from home for the first time in their lives. The anxiety of separation normally experienced by these late adolescents was accentuated by the closed-in feeling and the isolation resulting from the unusually severe winter. Upper respiratory infection was rampant among the personnel on the base. One of the occupants of the barracks who had an upper respiratory infection came down with a meningitic process, complete with elevation of temperature, stiff neck and headache. These symptoms were observed by his associates before he was removed to the hospital. That night about half of those in the barracks were affected with similar symptoms, minus the temperature elevation. Actually they did not have meningitis but their fear had been converted into these psychosomatic manifestations.

STUDYING BEHAVIOR

In attempting to understand the behavior of any given child there are three large areas which must be given consideration.

Individual Differences: Although we do not un-

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derstand the reasons very well, it is easily recognized that persons, including babies, differ from each other. We are able to predict with some accuracy the individual differences in physical growth and development. We can measure fairly well the basic intellectual differences in individuals. But there are intangibles which determine the manner in which the child experiences and reacts to this environment; and about these inner differences our understanding is quite limited. One baby may be hyperactive while another may be hypoactive, and as time passes this early manner of reacting may be observed to develop into a well-defined pattern of activity that is characteristic of the particular individual. Work is being done in an effort to determine what effect maternal emotional experiences and reactions during the prenatal period may have on the infant, and some interesting presumptive evidence is available. But about all that can be said at this time is that people are different and they react differently to the same stimuli.

Cultural Influences: Just as individuals differ one from the other cultural groups and sub-cultural groups differ in what is expected of its constituents. It is the society or culture which determines in large measure the process of child training and education. At first the child does not meet these cultural influences directly but through the medium of the parents. Attitudes within a culture, about a specific function, differ less than attitudes between cultures. For example, in the United States the majority of babies have discontinued breast or bottle feeding soon after their first year of life. Whereas in some other countries the baby is allowed to breast feed much longer, often until the child discontinues of his own volition.

Parental Influences: Undoubtedly parents are the most important factor in determining the reaction patterns and personality development of the child. This is especially true in human development because of the long period of dependency of the child while meaningful relationships are being established with the adults. It is during these early impressionable years that the child must progress from no awareness of self to a realization that he is a separate individual in his own right. Through the understanding and support of both parents the child gradually, through direction and trial and error, works out for himself the kind of person he can be as an individual and the kind of person he can be in relation to others.

CASE PRESENTATIONS

These presentations are taken from the cases that we have seen and serve to point out the various systems involved in these psychosomatic reactions, at the same time highlighting some of the important factors in the disorder.

Case #1: Nancy, an attractive 3½ year old girl, was referred because of a history of "breaking out in a rash all over". This had been occurring at varying intervals for a period of four months. She was described as a very sensitive child who would not mind her parents and who was very stubborn. Both parents stated frankly that they did not understand this child at all. In addition to the rash, they described nail biting and stated that she was a very high-strung child who did not get along well with children her age.

Interviews with the parents revealed them to be somewhat perfectionistic and rigid persons who made many demands of Nancy. In reviewing the history of her rash, it was evident that whenever it occurred she has been subjected to some stressful situation during which she became extremely nervous.

Case #2: Tom, a nine year old boy, was referred with the complaint of headache, intermittently for a period of two years. The headache usually appeared when he became anxious about something. He was a very competitive child, of very competitive parents, and there seemed to be a relationship between the onset of his headache and anxiousness centered around failure to achieve or failure to win in some kind of competition. The mother also gave a history of headaches.

It has been our experience that functional headaches are not too frequent in children before the age of puberty and that when they do occur one is usually able to find a history of tension headache in one of the parents.

Case #3: John, a 15 year old boy, was brought to the clinic by his mother with a history that he had suffered from rheumatic fever as a child and at that time the family physician cautioned against over-activity. He frequently became very anxious and experienced palpitation of the heart, accompanied by sweating. The mother had rheumatic fever during her adolescence and her activity had been restricted with the result that ever since she had been very heart conscious.

A thorough cardiac evaluation revealed no evidence of any organic disorder and the internist thought it unlikely that the boy had actually had rheumatic fever; at any rate he saw no reason to

restrict the activity of this young boy. After a few interviews the mother was able to accept the findings, to understand her sensitized attitude with the result that the boy was permitted the usual activity of boys his age. A follow-up a few months later revealed that he was asymptomatic and that he was an active member of the high school football squad.

Such reactions referrable to the cardio-vascular system in adolescents can almost always be traced to an organic or functional cardiac illness in some significant member of the family.

Case #4: Terrence, a 3 year old boy, was brought to the clinic with the information that he had "fits". These episodes had occurred on three or four occasions and were characterized by holding his breath, falling, and becoming cyanotic. A seizure work up was within the limits of normal. During the course of these examinations it was learned that the father and mother were experiencing considerable marital difficulty and that on each occasion when the child had experienced one of his "fits" it came after an argument between the parents at which time one of them might displace the anger and scream at the little boy or, as happened on one occasion, slap him across the face.

Case #5: Helen, a shy self-conscious girl of 14 who was unusually bright, was referred because of a history of persistent nausea and vomiting each morning before school. The physical examination was normal. Her parents placed emphasis on excelling in some area and this girl felt she was unattractive and that scholarship represented the only chance of success. It was learned that the teacher of her first class each morning, a language teacher, was a strict, perfectionistic, sarcastic "old maid" of about 40. Interestingly enough the vomiting was absent on Saturdays and Sundays. The mother placed a great emphasis on matters of health particularly diet and insisted that the girl eat breakfast before going to school even though she could be expected to vomit. After the first class was over the girl's normal appetite returned and she ate without difficulty.

The situation was resolved, though without much insight on the part of the family, when circumstances occasioned a change of teachers at the end of the semester.

Case #6: Jerry, a 10 year old boy, had been unable to have a bowel movement without the use of enema since early childhood. The physical examinations were normal. He and his sister had been adopted, when after several years of marriage, the parents were unable to have children. The father was a very busy man and spent little time with the children. The mother, a very intelligent person, freely revealed that she always had been over-solicitous and had given great attention to intake and output. She was constantly concerned that she do a good job in rearing the children and said, "I guess parents are more concerned about successfully rearing adopted children than they would be their own."

Efforts to have the father participate more in family affairs where the children were concerned were successful. Also, the mother was able to de-emphasize the concern with intake and output. As a result the boy within a period of about four weeks was able to eliminate normally.

Case #7: Barbara, an alert 6 year old, was referred by the school because of urinary frequency, occurring as often as six to eight time in the course of a morning. Complete physical and laboratory examinations were normal. The history was that the child had started school a month late when the family arrived in Japan and the difficulty had started immediately. The child has expressed concern to her parents that the other children were far ahead of her and she did not understand the teacher's explanations and was afraid to ask her what she meant. Examination of the child revealed a somewhat anxious little girl, who was very bright and who, even at that age, seemed to understand the connection between her symptoms and the school situation. The teacher was a person of more wit than warmth and at first intimidated the child by telling her that she could not go to the bathroom except at recess time. This increased the child's anxiety and the urgency increased. Treatment in this situation consisted mainly of interpretation to the teacher of the child's feelings and the mechanisms involved.

Case #8: Lance, a 12 year old boy, was referred because of the recent development of frequent spasmodic blinking of the eyelids. The physical examinations were normal. The history indicated that recently he had been enrolled in a parochial school where the scholastic standards were very high. His father, although an extremely intelligent person, had been unable to attend college and had constantly pushed himself to make up for what he considered his educational deficiency. He placed undue emphasis on scholastic achievement and pushed the boy beyond his capacity. The father was so engrossed in his job that the only time he ever spent with this boy was to supervise with great intensity and zeal

the time the boy devoted to his homework. There was discord between the father and mother in regard to pushing the boy to this extent, and as a result the boy was under great emotional strain.

TREATMENT

No attempt is made here to discuss the specific methods of treatment or to offer any psycho-analytic interpretation of symptoms. In treatment we attempt to create an atmosphere which will not threaten the parents and which will not point the accusatory finger at them as if to say, "It is all your fault."

We believe, despite all the popular writing about the inadequacies of parents, that the majority of parents love their children and do the best they can under the circumstances. And we have found that if the right atmosphere is created parents for the most part will actively and enthusiastically enter into the treatment process, which focuses not on the symptoms of the child but on the emotional pressures which result in the symptoms.

Some of the symptoms can be resolved in one or few visits, while others may take many visits for both parents and child. Obviously some of this takes time, and often when the parents come for the first time with the child they are very anxious to have something done right away. It is important not to be drawn into this maelstrom of urgency but to convey to the parents an attitude of optimism and willingness to help in resolving the problem. This prospect of help usually reduces their anxiety and impatience and enables them to cooperate in gathering the necessary data so that a dynamic treatment program can be instituted.

SUMMARY

The focus in this discussion has been on psychosomatic problems in children. Brief cases have been presented with symptoms referable to the major bodily systems. Emphasis has been not on the symptoms themselves, but on underlying factors disturbing the child which are expressed in the language of symptoms. It is our responsibility as physicians to understand the implications of this language in order to help the chld with psychosomatic manifestations.

Bristol Mental Health Clinic
Bristol, Virginia

March of Dimes

January is traditionally March of Dimes Month. This year's contributions to the March of Dimes will not only help polio victims for whom the Salk vaccine came too late, but will help finance the greatest attack on disease ever attempted by a voluntary health agency.

All of the resources of the National Foundation (formerly the National Foundation for Infantile Paralysis) will be thrown into a bold fight against such cripplers as birth defects, arthritis, virus diseases. While these, plus polio, will receive the immediate attention of your National Foundation, its broad research and professional education programs will allow freedom to attack new problems as they arise.

A daring undertaking, this new program? Perhaps so. But it was only through such a daring assault on polio that the American people made possible the development of the Salk vaccine that is so highly effective in preventing paralytic polio.

Pledged for more than 20 years to help victims of polio, the March of Dimes will continue to keep faith with these unfortunate cripples. Financial help for hospitalization, special equipment such as rocking beds and iron lungs will be provided those who need it. And the Foundation will continue to urge every man, woman and child to be vaccinated against paralytic polio. Until the under-40 age group is protected, there is always the danger of epidemics such as Detroit and western Virginia have just experienced.

To further this dynamic program you will be given many opportunities to contribute in January—through coin collectors, mailed contributions, the Mother's March, office collections, special gifts—give to the March of Dimes.

A Rational Treatment for Advanced Cancer of the External Ear and Temporal Bone

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AFIF KHURI, M.D.
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IT IS GENERALLY AGREED that squamous cell carcinoma is the commonest malignant tumor of the external ear. However, Mohs[1] and Pfahler[2] reported that basal cell carcinomas were more frequent in their series. The location of the tumor is of greatest importance in determining the prognosis of the patient. Eller and Eller,[3] and Sylven and Hamberger[4] have stated that those cancers arising in the cephalo-auricular angle, in the region of the auditory canal, or on the tragus, offer the poorest prognosis. Often the site of origin is deceptive, and extrinsic cancers may originate from an internal focus.

All of these malignancies of the ear are locally invasive, and metastases to the regional nodes occur relatively infrequently and late in the disease.[5] Cancers of the external ear generally spread endocranially. Surrounding structures are often involved and, occasionally, the patient presents himself with partial facial paralysis. Death results from hemorrhage, infection, or inanition.

The greatest single cause for failure in the surgical treatment of these tumors has been inadequate piece-meal removal resulting in a prohibitively high local recurrence rate. In 1951, Campbell advocated en bloc resection of cancer of the temporal bone.[6] In 1954, Figi also advised radical en bloc removal of cancer of the ear and temporal bone.[7] Neither author reported performing such a procedure. The same year, Parsons reported a sizeable series of successful en bloc resections of the temporal bone for cancers arising in the external and middle ear.[8] Recently, Gaisford reported a series of temporal bone resection for extensive cancers of the ear.[9] We have successfully utilized Parson's combined approach to the middle ear and temporal bone in the management of a very extensive, uncontrolled cancer of the external ear. We feel that this case clearly demonstrates the necessity for adequate en bloc resections in such patients.

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CASE REPORT

W.H.C., a 75 year old white male was referred to the Division of Plastic and Maxillofacial Surgery on July 9, 1956, with a well-documented history of cancer of the left ear of one year's duration. The lesion was first excised in April, 1955. The pathological report was Grade III squamous cell carcinoma. The lesion recurred shortly thereafter and again surgical excision was performed. Several months later, the cancer recurred and the left ear and surrounding tissues were treated with two courses of x-ray of 1000 r each.

Examination revealed an elderly male with a fungating tumor of the left ear. (Fig. 1). His chief complaint was constant left-sided headache and

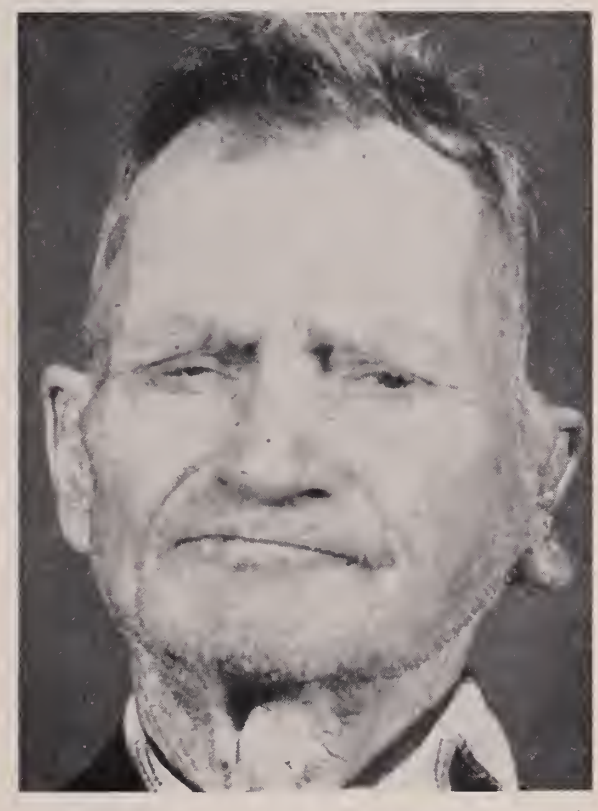


Fig. 1—Preoperative photograph. Marked fullness in parotid. Weakness of lower lip. Ulcerated tumor in external ear.

partial deafness in the left ear. The external canal was filled with a fungating tumor which extended through the concha into the posterior auricular skin. The parotid was hard and there was slight weakness of the left corner of the mouth. Visualization of the tympanic membrane was impossible because of the obstructing tumor. Pus and blood exuded from the external os. Audiometric studies indicated a conductive type of deafness. There was no tinnitus or vertigo. X-rays of the temporal bone revealed haziness with rarefaction in the central air cells.

On July 12, 1956, under general endotracheal anaesthesia, a circular incision was made around the



Fig. 2—Soft tissue involvement outlined with wide adequate margin. Middle fossa entered through temporal squama.

lesion allowing a 3-4 cms. margin. (Fig. 2) Approximately 1.5 cms. posterior to the ear canal, and in the deep portion of the bony external canal adjoining the drum, the mastoid bone was invaded. The sigmoid sinus was unroofed with a chisel and dental burr. After its identification, the dissection was carried anteriorly to include the entire parotid gland and facial nerve, with overlying cheek. Inferiorly, the upper one-fourth of the sternocleidomastoid muscle was included. Three subdigastric lymph nodes were negative by frozen section. Trephine openings were made in the temporal squama 3.5 cms. above the external ear canal. The dura was reflected from the petrous pyramid as far as the internal acoustic meatus. A chisel was placed medial to the tegmen tympani and directed downward and laterally. The petrous pyramid lateral to this point was removed en bloc with the soft tissue specimen. The internal carotid, internal jugular vein and dura were left exposed in the depths of this bony excavation. (Fig.



Fig. 3—Operative defect following resection of scalp, parotid and temporal bone.

3) A tear in the dura in the posterior fossa was repaired with a running 6-0 silk suture which incorporated a piece of temporalis muscle in the closure.

The use of a large rotation scalp flap facilitated closure of this large compound wound. An additional rotation check flap completed the closure. (Fig. 4)



Fig. 4—Immediate wound closure accomplished by large rotation scalp flap.

Except for a vesicle neck obstruction, relieved by a perineal prostatectomy on the fourteenth post-oper-

ative day, the patient's course was uneventful. He was ambulatory on the first day after the operation and had little or no dizziness. His wounds healed rapidly and he was discharged to his home.

He has been followed at regular intervals in the Plastic Surgery Clinic, and has had no sign of tumor recurrence at the time of this writing. He is able to carry on a life comparable to that prior to his operation. (Fig. 5 and 6)



Fig. 5 and Fig. 6—Patient free of disease over two years following resection.

DISCUSSION

Pfahler and Vastine have stated that the treatment of cancers of the external ear results in a greater percentage of failures than in any other superficial part of the body.[2] The tardiness of establishing a diagnosis in cancers of the ear has proved to be a determinate factor in uncontrolled ear cancer as pointed out by Towson and Shafstall.[10]

Uncontrolled carcinoma of the external ear invades the mastoid, middle ear and continues its extension endocranially. The parotid gland, facial nerve and great vessels are eventually involved. The disappointing results with fulguration of the tumor and radiotherapy are well accepted by most otolaryngologists. In 1892, Bircher first performed petrosectomy for an abscess at the petrous tip.[11] Heyer, in 1897, also reported a piece-meal resection of the temporal bone.[12] However, the treatment of cancer of the temporal bone must be radically different from the treatment of infection if we expect to salvage these patients.

The application of the principles of block resections for cancer of the head and neck applies to the treatment of advanced cancer of the external and middle ear. The sacrifice of contiguous structures without regard for facial symmetry in conjunction with a homolateral neck dissection is mandatory in order to eradicate the soft tissue extension of the tumor. Subtotal resection of the temporal bone en bloc is accomplished by an extradural approach through the temporal squama thereby exposing the petrous pyramid as far as the internal acoustic meatus. After unroofing the sigmoid sinus, the block resection of the temporal bone can be effected as described by Parsons. The necessity for an en bloc neck dissection is predicated upon the presence of clinically involved lymph nodes. In the case herein reported, we did not perform an associated neck dissection since the digastric lymph nodes were negative by frozen section. The use of a large rotation scalp flap permitted primary wound closure, thus obviating the troublesome complications associated with open wounds of this magnitude and location. A detailed report of this method of reconstruction will be published in the Journal of Plastic and Reconstructive Surgery.[13] As so aptly phrased in 1954 by Figi in an extensive study of cancer of the middle

ear:[7] "If it is true that here fools rush in where angels fear to tread, it is no less true that a defeatist attitude and a half-hearted attempt at eradication on the part of the surgeon is tantamount to the death sentence for most patients."

CONCLUSIONS

1. Advanced cancers of the external and middle ear should not be considered as hopeless conditions.
2. By adhering to the erroneous principle of piecemeal removal of tumors of the middle ear and temporal bone, we are jeopardizing the patients chances of survival.
3. Sound principles of reconstructive surgery have extended the scope of surgery for cancer of the ear and temporal bone.
4. Block resection of the temporal bone and contiguous structures in conjunction with a formal block dissection of the neck is the logical choice of treatment for advanced cancers of the external ear and temporal bone.

Bibliography

1. Mohs, F. E.: Chemosurgical Treatment of Carcinoma of the Ear. Surgery 21: 605, 1947.
2. Pfahler, G. E. and Vastine, J. H.: The Treatment of Cancer in the Region of the Ear. Am. J. Roentgenol. 37: 350, 1937.
3. Eller, J. J. and Eller, W. D.: Tumors of the Skin, Lea and Febiger, Philadelphia, p. 394, 1951.
4. Sylven, B. and Hamberger, C. A.: Malignant Melanoma of the External Ear. Ann. Otolaryng. 59: 631, 1950.
5. Ward and Hendrick: Tumors of the Head and Neck. Williams and Wilkins, Baltimore, 1950.
6. Campbell, E., Volk, B. M., and Burklund, C. W.: Total Resection of the Temporal Bone for Malignancies of the Middle Ear. Ann. Surg. 134: 397-404, 1951.
7. Figi, F. A. and Wiseman, P.: Cancer and Chemodectomes of the Middle Ear and Mastoid. J.A.M.A. Nov. 20, 1954.
8. Parsons, H. and Lewis, J. S.: Subtotal Resection of the Temporal Bone for Cancer of the Ear. Cancer 7: Sept., 1954.
9. Gaisford, J. D., Hanna, D. C., and Susen, A. F.: Major Resections of the Scalp and Skull for Cancer with Immediate Complete Reconstruction. J. Plas. and Reconst. Surg. 21: 335-344, May 1958.
10. Towson, C. E. and Shafstall, W. H.: Carcinoma of the Ear. Arch. Otolaryng. 51: 724-738, 1950.
11. Bircher, H.: Phlebitis des Sinus transversus petrosus inferior und cavernosus. Centralbl. f. Chir. 20: 483-485, 1893.
12. Heyer, H.: Ueber einum Fall von Ohrcarcirom, behandelt mit Resektion des Felsenbeines. Deutsche Ztschr. f. Chir. 50: 522-533, 1899.
13. Coleman, C. C., Jr.: Scalp Flap Reconstruction in Head and Neck Cancer Patients (To Be Published in Journal of Plastic and Reconstructive Surgery).

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The Average American Doctor

The U.S. doctor works much harder than the average person and plays far less. This is disclosed in a recent survey conducted by Parke, Davis and Company among more than 9,000 doctors. The survey is incorporated into the current issue of its "Patterns of Disease," a publication designed for the exclusive use of the medical profession.

Half the physicians reporting average a work week of 50 hours or longer—at least 20 per cent more than the accepted norm of 40 hours. Close to 60 per cent spend less than 10 hours a week on recreation, and of the 37 per cent who pursue hobbies, half spend four hours or less per week on these diversions.

The average American doctor is 44 years old, five feet ten inches tall and weighs 173 pounds. These professional 'vital statistics' are based on a special survey, both the largest and the most recent of its kind, conducted by the pharmaceutical firm among more than 9,000 doctors.

Heart disease appears to be the particular Nemesis of the U.S. physician. In a study of 2,700 physician deaths from July 1, 1957, to June 30, 1958, heart disease was the single or contributory cause of 50 per cent.

In the under 45 age group, auto accidents ranked first as a contributory cause of death, accounting for more than 40 per cent.

Colon Preparation For Radiological Studies Using a New Drug

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FOR DECADES castor oil has been the drug of choice to evacuate the colon prior to radiographic study. Many other laxatives and cathartics have been tried but none could measure up to castor oil for routine use. Recently a new drug, Dulcolax, has been introduced in Germany. The German literature describes in detail its use and effectiveness in replacing enemas for preparation of patients for surgery and for their post-operative care. Using Dulcolax as a rectal suppository, satisfactory evacuation occurred in ten to forty minutes after administration with almost uniformly favorable results. A report by Hauff[1] of 200 unselected surgical patients following minor and major surgical procedures indicated that the rectal suppository produced a reliable and for most patients a painless emptying of the entire large bowel. Other reports[2,3] concern treatment of patients with different types of constipation and the preparation of patients for sigmoidoscopy. Ganz and Zindler[4] reported almost uniformly favorable results in 375 patients and specifically mentioned preparation of the colon for radiographic procedures. They did not give the drug by mouth using only rectal suppositories.

The drug, bis (p-acetoxyphenyl)-2 pyridylmethane, trade name Dulcolax,[5] is a crystalline compound, colorless, tasteless and insoluble in water and alkali.[6] It is one of a family of new laxatives that exerts the laxative effect by contact with the intestinal mucosa rather than by absorption into the blood stream, or irritation with hydrostatic effect. No irritative change on the intestinal lining has been discovered even after prolonged over exposure by massive doses in animals. For practical purposes no contraindication to its use is known since no systemic effect has been observed.

It soon became apparent after using Dulcolax with selected patients that its qualities were superior to castor oil in several respects. No attempt to perform a controlled study comparing the qualities of Dulcolax with that of castor oil has been made since it was quite evident that better results in the preparation of the colon were being obtained with Dulcolax, with less discomfort to the patient. Patients prefer Dulcolax to castor oil for many reasons. The tablets are tasteless and the action they produce generally does not have the griping intestinal discomfort or peristaltic rushes that castor oil frequently produces. The stool usually is a semi-formed soft stool rather than a liquid stool. Even if the effectiveness of the bowel emptying were only as good as castor oil the drug would be preferable to castor oil because of the ease of administration. Replacing the time consuming, and frequently ineffective, cleansing enema and the discomfort that often accompanies the enema is another advantage of using rectal suppositories.

The result of colon preparation in about 70 of our patients were carefully observed and in all but three of them satisfactory preparation of the colon was obtained. Many of them had excellent preparation exceeding that usually seen with the castor oil routine. One failure occurred in a patient who had a barium meal with subsequent stasis of barium in the colon over several days. The Dulcolax suppository caused evacuation but only after repeated administrations did the colon become clean. One patient had a poor evacuation following the usual Dulcolax dose but this was repeated on the following day and very good preparation of the colon was produced. The third patient retained fecal material and barium in the colon after several rectal applications and oral doses of Dulcolax.

There is some evidence that failure of Dulcolax to produce catharthis has been due to a counter action by some other drug the patient is concurrently receiving, such as the opiates. We have only a few cases in which this has occurred and the evidence is therefore too scant to draw a conclusion at this time.

Our present routine of preparing the colon is to restrict the solid intake the day before the studies limiting the afternoon and evening meal to clear liquids that have no residue. At 3 P.M. the day prior to the radiographic examination two Dulcolax tablets or 10 mgm. are given by mouth and the following morning at 7 o'clock a 10 mgm. Dulcolox rectal suppository is used. (We use the same prep-

aration for intravenous pyelogram.) In several instances debris was found in the proximal colon following this procedure but on questioning the patient we found that many of these had had solid food for supper rather than the liquid diet. It may be that using the drug in combinations with cleansing enemas will provide the best method of preparation for barium enema. Giving it at a different hour may also be of value in some cases.

We have had limited experience with children but in several incidences very satisfactory results were obtained. Rectal suppositories proved very effective in preparing two children. According to the manufacturer half of a rectal suppository can be given to very small children and if this does not produce satisfactory emptying after thirty minutes to an hour it may be repeated. Children usually cannot take the drug by mouth because chewing the tablet or dissolving the tablet in the mouth removes the enteric coating of the tablet and produces vomiting.

SUMMARY

A new colon evacuant, Dulcolax, used in place of castor oil in the preparation of patients for radiographic studies, has proved very satisfactory. Castor oil no longer is a part of our routine preparation at the Roanoke Memorial Hospital. The drug stimulates emptying of the bowel after contact with bowel mucosa and generally produces a much better and more comfortable evacuation than castor oil. Use of the drug following surgery, in nursing mothers since it is not transported in the blood and its use generally to replace enemas seems reasonable and practical.

References

1. Hauff, F. W.: Use of Suppositories, Containing a Topically-Acting Laxative, in Surgical Patients. Drutsches Medizinisches Journal 5: 483-484, August 1954.
2. Kolsharn, Rosemarie: Treatment of Constipation and Preparation for X-Ray Examination by Means of Laxans Suppositories. Muenchenmed. Wchnschr. 96: 949-950, 1954.
3. Hobbs, J. Barclay: Intestinal Obstruction, a case report. Brit. J. Clin. Practice 12: 31-32, 1958.
4. Ganz, P. and Zindley, M.: The Use of a New Contact Laxative Before and After Surgical Operations. Clinical Trial on 275 patients. Die Medizinische No. 29/30: 1042-46, 1955.
5. Distributed by Geigy Pharmaceuticals, Ardsley, New York.
6. Schrnidt: Arzneim—Forschung 3, 19 (1953).

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"Shoe Dermatitis"

A chromium salt used to tan leather has been found to cause skin eruptions on the feet, according to Dr. George E. Morris, a Boston dermatologist. The material has long been suspected of causing dermatitis, but it has never—until recently—been available for use in patch-testing which would prove its effect on the skin.

His is the first report of a study in which persons suspected of having shoe dermatitis have actually been tested with the chrome salt found in their shoes, he said in the November Archives of Dermatology, published by the American Medical Association.

He found four patients with shoe leather dermatitis who reacted positively to the chrome salt. In addition, two leather workers who previously had "chrome dermatitis" reacted positively to the material.

The chrome salt joins a number of other substances found in shoes that cause dermatitis. They include dyes and other chemicals in the leather, the material used in the box toes of shoes, and rubber adhesives.

The chrome salt is leached from shoe leather by an acid in perspiration and deposited on the skin. He noted that it has long been believed that the chrome salt could not be separated from the leather. However, two leather chemists recently proved that it could be.

The dermatitis will clear if the patient stops wearing leather shoes.

Psychogenic Headache

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THE INCIDENCE OF HEADACHE and the public concern seem to have pyramided in our time. In contrast with this experience, many other formidable disease entities have been brought under our control. Fortunately, the investigation of headache has also accelerated. There has been a wealth of contributions on the subject in the recent literature, yet, undoubtedly, there are many things which remain to be said, and particularly so on headache of psychogenic origin.

When we speak of psychogenic headache, we may offend our patients who are likely to confuse *emotional* with *imaginary*. Also our colleagues may feel that we ignore their results with therapy which may be so successful that it deserves the name *specific*. Therefore I would like to inquire, at least cursorily, into what we know concerning, first, the perception of pain and, second, the mechanism by which it is produced, particularly when it involves our emotions.

It serves my purpose to define pain as the unpleasant awareness of peripheral stimuli which have run the gauntlet of possible modification in at least two important areas. We may designate these areas very vaguely as the lower and higher cerebral centers. The processing of the sensory impulses as they ascend may result in a dampening effect, in amplification, or even in reverberation. At the summit, the final effect will depend on an act of interpretation.

There are many stimuli which are adequate to produce pain, but the ones which are most typical and important in psychogenic headache are those associated with changes in the calibre of blood vessels, especially dilatation, and with the increased tonicity of muscle fibres. It is obvious that our emotions can initiate both types of activity, yet the end effect of which the patient complains may depend on a complicated series of variable reactions, which can completely obscure the source.

Every element of the vascular tree is capable of both dilatation and constriction. Regional or generalized vasodilatation may presumably produce headache, as after a spinal puncture or the administration of nitrites. Isolated instances of vasodilatation may occur, but I question their effectiveness and clinical importance unless there is an associated obstruction which limits the vascular outflow. On the other hand, vasoconstriction can produce a proximal dilation or will make it more significant. I believe that the fundamental reaction in the vascular mechanism of headache is a central discharge of vasoconstrictor impulses. It is probable that these affect most frequently the smaller blood vessels, but may involve any of the larger elements also, and it is conceivable that the site of action may change or multiply as the headache progresses. Superimposed on the vasoconstriction, may be both passive and active vasodilatation, which likewise may occur anywhere. Every patient has an autonomic nervous system which is peculiar to himself. The balances and imbalances of the sympathetic and parasympathetic divisions may produce a pattern of vascular reaction which is characteristic of the individual.

We do not as yet have complete information concerning the physical and chemical stimulation of the nerve endings associated with these blood vessels and with the adjacent tissues. Stretching and anoxia may be important. The essential fact for our purpose, however, is that these nerves belong chiefly to the visceral sensory system. They are not truly specialized nerves of pain, although massive stimulation can produce a severe discomfort which is fairly well localized. Very often the effect of stimulation of the visceral sensory elements will be appreciated as pain referred to somatic sensory elements, usually of the same segmental distribution. Besides the referred pain, the patient may experience reflex hyperalgesia, glandular and vasomotor activity, and muscle spasm. These responses are especially important in the region of the head, because of the abundant innervation, the close association of somatic and visceral nerve elements, and the overlapping of the segmental distribution.

Finally, I want to point out that our nervous system tends to respond to repeated stimuli by the formation of habitual patterns of reaction. The response will depend not only on the immediate stimulus, but will be "conditioned" by all of the individual experiences which have preceded.

There are several important conclusions which

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we may derive from these assumptions. First, we may experience pain without the stimulation of specialized nerve endings. Other afferent elements may assume the function of pain through conditioning and interpretation. It is evident that headache can be an art which is readily acquired. Again, the headache may assume an endless variety of forms. Also, the subjective experience or complaint does not measure the intensity of the stimulus. Nevertheless, I would never say that any headache was imaginary, and certainly there should be specific ways of treating a condition where reversible changes in the calibre of our blood vessels play such a leading role.

I believe the field of psychogenic headache is of definite extent, although the limits will be set by each observer according to his experience. My criterion is simple. When I discover an emotional situation which explains the patient's symptoms satisfactorily to me, I believe that the psychic state is more important than the physical mechanism which makes it manifest. I consider that psychogenic headache is the true etiologic classification whether or not the symptoms may be further described as histamine cephalgia, tension headache, migraine, and such like.

Our conscious state can give valuable clues as to our emotional condition, but it rarely tells the whole story. It is doubtful if any of our experiences are ever entirely lost. There is tremendous emotional activity in our subconscious. It can and does produce mental or physical reactions which result in headache, whether or not we are aware of the causal connection.

There are many types of response to unpleasant or intolerable situations. Sometimes the sudden fury of events brings panic, or acute anguish, but not immediate headache. Many of us rarely, if ever, react to stress with headache. When it does occur, there must be time and opportunity for the reorganization and substitution of ideas. One can easily imagine that headache would be a welcome escape from reality, or could bring some equivalent gratification; but, since the patient's reactions are illogical, it is very likely that he will be cheated of his reward. He will be helpless and undone, the victim of emotional usury.

There are at least two great personality forces which tend to express themselves in headache. The first is not easily described in a single word or phrase. It has to do with the inability of the patient to express feelings such as hostility and resentment, especially towards loved ones, because in our culture such expression is taboo. The second force is far more prevalent. It is the lack of confidence in one's self in relation to his environment. I call it *nervousness*, because that is a word which the patient understands.

Many patients are aware that they are nervous. Almost any intelligent person will be nervous under suitable conditions. The chronic state will depend on everything that ever happened to us, particularly in childhood.

If we would understand psychogenic headache, we should watch for and study its beginnings in children. It is an acquired disease. Children are not born with the faculty for headache, although I have seen an intelligent mimic, three years of age, give a superb performance of Horton's syndrome. Children learn easily from their elders. If it were not such a universal topic of conversation, I would expect headache virtually to disappear. Two factors are of the utmost importance in its development. First there is the need which the child feels for security. This is supplied best by a wholesome demonstration of affection. Too often the need is ignored, and the child, who can express himself even less than his parents, resorts to every means at his command in order to get attention. The second factor is the anxiety of the parents which magnifies and fixes the importance of the child's symptoms in his receptive mind.

The pattern of the response will be characteristic of the individual. His headache will bear the impression of his early cultural and emotional environment as well as of his physical endowment. Some patients react with headache quickly. Others exhibit a building up of tension. Some have insight and welcome any help we can give them. Still others, to whom headaches are useful, will show hostility to anyone who would jar this prop to their ego. Patients who find it necessary to maintain rigid ideals may ignore the conflict within and about them until they explode in an attack of "sick headache". Another patient may experience ophthalmic migraine after relatively trivial provocation.

A pattern of behavior which we should examine more critically is vomiting. Most patients with so-called migraine take great pride in this accomplishment. Its performance proves the severity of their suffering and delivers an emotional punch, or climax. However, pain, as far as I can observe, does not cause vomiting, although it can contribute to shock and to autonomic disturbances which are often associated with vomiting. Vomiting is easily learned

in childhood, and may be carried over into adult years. Certainly it does not measure pain.

When a patient presents himself with headache, our immediate concern is to uncover an acceptable explanation of the symptoms, whether the basis is physical, mental, or both. Many times the physical basis can be demonstrated satisfactorily. I believe that, in my experience, no factor has been more important in headache of organic origin than disability of the temporomandibular joints. The EENT area is our special province, but, of course, is not the only region involved. Possible allergies must always be kept in mind. Even if the psychic element is paramount, anything that affects the patient's general health and comfort will be important, even to a hypochondriac. Conservatism does not exclude the correction of a disabling condition if the patient can be fully enlightened and adequately prepared.

In taking the history, we are interested, of course, in classifying the headache, but also in getting to know the individual, his background and problems. All details of the complaint are important, the mode of onset, localization and radiation, frequency, variability, effectiveness of treatment. The patient is usually willing to talk, and we can learn by listening. Sometimes the patient may describe symptoms which are pathognomonic or highly suggestive, at least, of organic disease. Of equal importance to us, however, will be the manner in which the history is given.

We must learn to look for the emotional overtones in the patient's response. It is entirely possible to recognize them. I have found the method extremely valuable in spite of a full quota of mistakes. Its potential is only limited by the skill and training of the observer. These observations are as valid as if they were made in the laboratory. They may permit us to make a diagnosis in minutes instead of weeks.

It is characteristic of the patient with organic disease that he tends to minimize the importance of his symptoms. When he is deeply, perhaps unduly concerned, he may describe them vividly, but with a certain objectivity. This is also true of the patient with a frank anxiety.

The neurotic patient's chief concern may be the impression which he makes on the examiner. His feelings are paramount. Everyone must recognize and share his discomfort, especially those closest to him. If he were to lose or cease to employ his power of communication, we may indeed wonder if he would not get well.

The depressed patient is typically slow to respond, but, if severely depressed, he may be agitated. He may express his feelings in his face, rather than by words. He may not ask sympathy or understanding, but relief.

The less knowledgeable patient is more likely to dramatize his complaints and to describe them in anatomical terms. On the other hand, the symptoms of the schizoid are not always bizarre, and he may be either calm and indifferent or concerned. Actually every patient is an individual and grouping them into rigid categories is a poor approximation of the truth.

The questions which we need to develop the patient's personality and to define his headache are as obvious as they are simple. Each one has a definite purpose and value.

How long has the patient had headaches? When was the earliest instance? Have the headaches increased in frequency or severity? What brings them on? What relieves them? Are they related to frustrating experiences?

Is the patient well? Does he drag along, or is he always on the go? Perhaps he feels "weak all over". Is he a good sleeper? How much time is allowed for sleep? What does the patient think is the cause of his headache?

Are there brothers and sisters? If so, what is the patient's place in the group? Did all the children share equally in the parents' affection? Are the father and mother living? What is or was their health, or when and why did they die? Did any other members of the family ever have headache?

Is the patient married? Are there children, and how many? Are they well? Is the spouse well, and does he sleep well? Is the wage-earner regularly employed? Is house work a drudgery, or support of the family a burden? Is there opportunity for recreation?

It is rare that one wishes to probe a tender area. An expression of sympathy may encourage the patient to speak more freely. Sometimes one may ask if the husband is a good father, is he affectionate, does he drink? Is the home shared with in-laws? Is much time spent in church work? Are there serious economic problems or disagreements?

The longer the history of headache, the farther back it goes into childhood, the less likely it is to be due to serious organic disease. Also it is typical of psychogenic headache that attacks, which are later

described as minor, will increase in frequency and severity as the patient focuses his attention on them more and more, and as his resultant anxiety builds up. It is typical also that these headaches are relieved at first by simple means which later lose their effect, as by aspirin or by wearing any sort of glasses.

Of course the patient's health and what he thinks about it will affect his emotional stability. Many people think they are abnormal unless they feel like "live wires". On the other hand, the energy of the "go-getter" may be less inexhaustible than it seems. Excessive store is set on the ability to sleep. Failure to sleep may be due to worry, whether recognized or not, but it is due often to improper planning and to habits which allow insufficient opportunity to relax.

The patient often has a well defined fear as to the cause of his headache. For some reason he may be too sensitive and reticent to reveal it early in the examination. Whenever this information can be obtained, it gives one a direct approach to the patient's problem. The clue is more significant if it is volunteered.

The oldest child is more likely to complain. He has the greatest need for attention, but unfortunately is rarely able to express himself adequately. His drives are frequently misunderstood, and may provoke an impatient, even brutal, reaction. This is the child who likes to munch from the principal's aspirin bottle, and who may be referred by his teacher because of headache or eyestrain. Often the oldest child is asked to accept responsibilities in the family group which are unsuited to his age. Happily he is prone to have better judgment, and usually outgrows his more obvious stigmata.

Everyone may have his emotional emergencies. Any child may recognize, for example, an absence or disproportion of affection. The younger child is not immune to headache, especially since he may be more suggestible.

It is always a shock to lose or never to have known a parent. Insecurity will also develop if the parent is chronically ill, or a chronic complainer. It is not important that the parent confess his headache continually. A child may be impressed indelibly by a single well-acted episode.

Almost every single female would like to be married. Almost every married couple who do not have children must battle with frustration. Children may create serious economic problems which the parents are often poorly prepared to meet. Sometimes insecurity of health, of family, of job, and of temperament join together to administer a crushing defeat.

Prophylactic treatment is always to be desired. Its importance will be limited by what we know of the etiology of the disease and by the opportunity which we may have to make use of our knowledge. Little or nothing has ever been said about the preventive treatment of psychogenic headache in children, but, in my experience, the results have been so encouraging, often so spectacular, that I consider it to be the key to the larger problem.

The child who needs "attention" will develop mannerisms which are simple to recognize. He is typically an older child. He may be difficult to examine in the presence of parents, yet is peaceful as a lamb when they are out of the way. His reactions are quite purposeful in contrast to the aimless overactivity of an only child or of any child which has been subjected to excessive, useless fondling. Also it is easy to note the dominance of the mother who never allows her child to speak or choose for itself. We can likewise observe the anxiety and overly protective attitude of the parents and their emotional immaturity which demands that every unpleasant sensation be abolished immediately.

Let us discount brain tumor, and migraine, and glasses. Let us help the parents and teacher to understand the child's need for security. Encourage them to exercise patience. If they are intelligent and interested, show them how they can improve their technics. The mother can learn to put an arm around each of two children, instead of embracing only one. These children are not "spoiled". They demand attention because they need it. Their response to affection can be magical.

If a child complains of headache, the immediate treatment should be to show interest, but not concern. A friendly, sympathetic smile, a hug, a pat on the back, some special attention will be the best medicine. Even the mildest medication may suggest to the young patient that he has a serious disease. The first aspirin can do as much harm as the first "drink". Aspirin is the fetish of those who believe that no one should ever experience the least discomfort. Throw the bottle away. The mother may reasonably wish to consult a physician, but she should not reveal her anxiety.

Try to maintain a confident attitude at all times, especially with children. Emphasize the favorable findings in the examination. If we try to enrich each patient with some encouraging thought, I am sure

that many will be grateful in later years for our inspiration.

As the young patient grows older, the pattern of his reaction tends to become fixed. It may be possible to give him some insight into his condition and the important environmental factors. However, we are likely to meet with resistance, sometimes from the patient, but especially from the mother. It is obvious that we can only help those who truly desire our help.

To the more mature patient, I like to point out the simplicity of the vascular mechanism of headache. I often use the familiar ice cream headache as an example of this and also of referred pain. The immediate reaction to chilling is constriction of the palatine vessels, but the pain is referred to the superficial temporal area.

I recall the acts of blushing and blanching to illustrate the effects of our emotions on our circulation. I make comparisons with the telephone system to explain how the brain stem reinforces or filters out the messages which we receive from our nerve endings. We can illustrate the tendency of our nervous system to develop habitual patterns of reaction by pointing to our preprandial symptoms.

I emphasize that nervousness is well nigh universal. It is neither mysterious nor hopeless. Improvement will depend on a series of favorable experiences which will add to our self-confidence. The source of our strength can be within ourselves. No matter what may cause a headache, our attitude toward it can make it better or worse.

Many patients will ignore or reject this approach to their problem. It will mean more to patients with some slight scientific background or curiosity. Often the seed which we sow will seem to be wasted, but it can survive a period of dormancy and grow into a form which the patient will accept.

It is desirable whenever possible, for the patient to develop some degree of insight. A few very general observations may be offered by way of comment on the history. An interested patient will be likely to fill in the particulars. Sometimes valuable leads will turn up from private interviews with friends or relatives.

I would not withhold medication from patients who have been dependent on it. However, I try to keep it as simple as possible, and especially to help the patient understand and appreciate how the drug modifies or assists our physiology. I aim always to build up the confidence of the patient in himself, rather than in some mysterious "nerve medicine" or pain killer.

I may use very carefully a mood-elevating preparation, such as dexamyl, on occasion, to show the patient how simple it is to raise his spirits and to attain the drive which he thinks is normal. Reserpine in minimal doses may be valuable, especially if the patient is encouraged to recognize the situations which require its tranquilizing effect. Its action is as prompt as that of the usual oral medication, contrary to some earlier teachings.

Aspirin can produce a comfortable, reassuring sensation, possibly through dilatation of peripheral blood vessels. Other forms of medication may be more or less specific in their action on those blood vessels which may be directly concerned with certain headaches. Other drugs constitute crude, even though successful, forms of psychotherapy. Almost any regimen or drug, except narcotics, may be justified if it gives us the time and opportunity to study the patient and to help him solve his difficulties. We must remember that time is a factor in the healing of emotional illness. If we did nothing but create a friendly, encouraging atmosphere, most of our patients might heal themselves.

It would seem unnecessary to condemn the use of narcotics in the management of psychogenic headache. The opinion is general that they are contraindicated, yet I find that they are used again and again. I would conclude that a great many of us do not recognize the importance of the psychogenic element in the patient's complaint. I believe that it is possible to demonstrate the following fundamental fact: no matter how tortured the patient may be, there is no drug which will abolish his headache quicker and more completely than to resolve the conflict which caused it. When the patient becomes dependent on narcotics for relief of headache, he withdraws more and more into his logic-tight shell, and effective treatment becomes vastly more complicated and difficult.

An unfavorable environment often holds the patient in its grip. Many a youth would do well to leave home and to strike out for himself, but independence of thought and action have never been allowed to develop. The wife and mother may have obligations which it would be inconceivable to disregard. Sometimes a period of hospitalization under suitable conditions will enable the patient to reorganize his strength. Also, on occasion, we may be able to help the patient plan and carry out worth while changes in the routine of living. Many times

it appears that the patient is acting out resentments which he finds it difficult or impossible to put into words. We should encourage him to recognize his problem and to attack it more directly. The help of a psychiatrist may be desirable or necessary. Let us hope it will become more generally available and appreciated.

Finally, we should never overlook the opportunity to improve the patient's physical health and well-being.

Heart Disease As Anxiety Defense

For some persons to face life, they may need to believe they have heart disease even when it has been proved they do not. Their conviction may represent a necessary defense against "potentially overwhelming anxiety." (November 22 Journal of the American Medical Association)

Three doctors made a six-year study of 52 persons with chest pain. Of these 27 were classified as having a "cardiac neurosis," in which they showed no evidence of heart disease but were convinced of its presence. Twenty-five had angina pectoris, a disease marked by paroxysmal chest pain with a feeling of suffocation and impending death. Caused by an oxygen shortage in the heart, angina pectoris is usually precipitated by effort or excitement.

The 27 patients who believed they had heart disease were "all intensely anxious people whose neurotic behavior was readily apparent." They tended to dramatize their symptoms and often referred to their "heart pain." Some of them were totally incapacitated, while others were able to lead an active and constructive life in spite of their symptoms.

They showed "a high degree of secondary gain" from their ailment. In some, the pain represented a means for setting limits to their activities and freed them temporarily from intense pressures or responsibilities. It seemed to act as a means of getting attention and of controlling family members. In others, the pain represented an acceptable "excuse" for failing to attain certain objectives. For some there was a definite monetary compensation from their pain. If their compensation or need for invalidism was questioned, they became angry and defensive.

"Once an individual has allowed himself to regress to this stage of dependency, it is difficult or impossible for him to relinquish this way of life even though the diagnosis of heart disease has been disproved. Their eventual incapacity equals the most serious types of heart disease. Sudden withdrawal of long-continued compensation may be disastrous. It seems highly probable that the conviction they have heart disease may be essential for the functioning of some patients in life at certain times."

Under these circumstances it is often advisable to allow the patient to maintain his cardiac neurosis. However, physicians should do all they can in helping such patients overcome their fears by understanding the underlying sources of the patient's anxiety and his conflicts.

Other points the study showed were:

—The average number of doctors consulted by each patient in the cardiac neurosis group was 4.7 compared to only 1.5 for each patient with angina pectoris. It was not unusual for the neurotic patients to be consulting a number of physicians simultaneously.

—The onset of chest pain in every patient with cardiac neurosis was preceded by increasing emotional tension and was often associated with deterioration in their life situations.

—Some of the patients with angina pectoris had cardiac neuroses as severe as the members of the other group. These patients were very anxious, which increased the frequency and severity of the anginal attack. They became "overtly terrified and behaved as though any physical or emotional strain was too great for them. They seemed to have 'wrapped themselves in cotton wool.'" However, most overcame their fears and learned to live constructively within their newly imposed limits.

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Congenital Microphthalmos with Cyst Formation

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CONGENITAL MICROPHTHALMOS with cyst formation is an uncommon condition which represents a failure in the normal closure of the fetal fissure. The fetal fissure closes during the fifth and sixth weeks (10-18 mm. stage) of embryonic life. This closure is complete at this stage except for a small notch or crescent at the posterior pole of the eye. At the 20 mm. stage this crescent closes and gradually merges with the surrounding tissue.

At this early stage, the cellular differentiation of the retinal layers lags behind in the region of the fetal fissure so that the margins of the fissure are not developed as completely as elsewhere when it closes. The inner retinal wall grows faster than the outer so that at the time of closure a fold of undifferentiated retinal tissue borders the pigmented epithelium along either margin of the fissure. Normally these two folds fuse, this process begins in the central part of the fissure and proceeds anteriorly to the rim of the optic cup and posteriorly over the optic stalk. The inner and outer wall of the retina then separate and no evidence remains to mark the site of the former fetal fissure.

If any injurious influence acts upon the embryo during the stage of closure of the fissure, the retinal tissue at the margin of the fissure may become either prematurely differentiated or the growth rate of the inner wall may become unduly accelerated causing excessive eversion of the retinal tissues and hence herniation of this retinal tissue through the fetal fissure with a retinal cyst formation. These cysts may vary from several small cysts to a single large cyst located in various parts along the fissure.

Microphthalmos is not necessarily associated with cyst formation, but when it is, it is usually of a marked degree and may even be confused with anophthalmia. Microphthalmos may also result from any influence that retards growth of the eye at any stage in embryonic development.

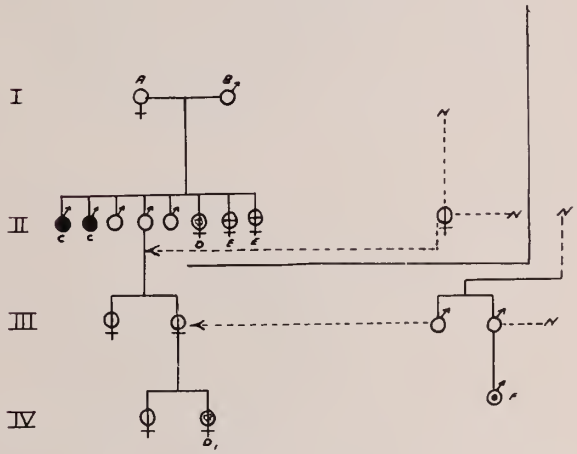
CLINICAL FINDINGS

These may be varied depending on the degree of microphthalmos and the degree of cyst formation. At one end of the scale is that group of patients who have an unusually small eye which is grossly abnormal but easily diagnosed as microphthalmos. At the other end are those cases in which no eye is discernible, the globe having been pushed out of sight by a cyst of varying size. These latter cases can easily be mistaken for anophthalmia. X-ray evidence of a patent optic foramen may help prove the existence of a rudimentary eye. Usually this foramen is markedly narrowed or obliterated in true anophthalmia.

ETIOLOGY

The direct causative agent in these cases is often obscure, but in some a definite history of some intrauterine infection or familial trait is found. Macklin considers this defect mainly due to inherited causes; due however to its being a recessive character in some families, at least, the hereditary aspect may be overlookd.

The pedigree of this case is presented in Figure 1.



PEDIGREE OF AFFECTED CHILD:

Fig. 1. I, II, III, IV generations, A & B, great grandmother and grandfather first cousins, C-congenitally deaf; E-deceased in infancy; D-microphthalmos; D_1-microphthalmos and cyst formation; F-coloboma of iris (see text); N-denotes ancestory without any apparent abnormalities.

The first generation, that is, the great grandmother and grandfather, were first cousins. Their offspring were eight in number—five males and three females. Of the five males, two were congenitally deaf; and

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of the three females, two died early and one had microphthalmos. The patient's grandfather was unaffected, as was the third generation. On the father's side no abnormalities were found except for one of his brother's children who has a small coloboma of the iris which of course represents a somewhat similar defect embryologically.

In the fourth generation there are two children, both living. The first child by these parents was normal but the second is the case being presented. This pedigree suggests indirect recessive transmission of this trait. The first generation, great grandmother and grandfather, apparently carried this recessive factor which showed up in their offspring. The trait did not manifest itself again until the fourth generation when the parents of these children, both of whom carried the latent recessive factor for microphthalmos and incomplete closure of the fetal fissure, mated and the two recessive factors met in one individual and produced this defect.

Falls states that the following conditions are usually manifest in recessive transmission:

1. Neither parent shows the trait but both are carriers of the abnormal gene.
2. The rarer the trait the higher the proportion of blood kinship among the parents over that found in the general population.
3. When, as may rarely happen, two affected individuals marry all of their children will exhibit the trait.
4. Approximately twenty five per cent of the brothers and sisters may exhibit the trait.

Macklin, in her excellent studies of the hereditary transmission factor in these cases, found that the transmission for a microphthalmos was usually of the recessive variety although in her review of other cases she found that the transmission may be of the dominant or direct variety, that is from one generation to the next generation, the abnormality being manifest in each generation. As well as direct transmission, she also found evidence, through a pedigree presented by Ash, that definite sex-linked transmission could take place in these cases, the trait being manifest only in the males of the family.

From these different mechanisms of transmission of microphthalmos it seems that the factor for a certain condition may be dominant in one family and recessive in another. Also, it may be that the outward manifestation of the disease is the same in different families while the underlying pathology may be dissimilar. This probably explains the two different modes of transmission. Macklin states that there may also exist not only qualitative but quantitative differences between defect and normality on one hand, but also between two normals or two defectives. A defect then which is sufficiently strong to overshadow the factor for normality in one family acts as a dominant character, but the same defect present in another family where the factor for normality may be quantitatively stronger is unable to assert itself and becomes recessive.

CASE REPORT

Baby M was born on May 22, 1954, following a normal spontaneous delivery. There was no history of maternal illness during the pregnancy and no history of german measles could be elicited. Both parents were RH compatible and serologies were reported as negative. There was a family history of congenital abnormalities which has been presented in an earlier paragraph. The patient was seen two weeks after birth and the physical examination was non contributory except for the defect present in the left eye. The eyelids were normal and the left eye appeared definitely smaller than the right (approximately two thirds of the size). A large colcboma was observed in the iris at the six o'clock position. The cornea was somewhat cloudy but the conjunctivae appeared normal. The eyeball transilluminated normally except for a darkened area inferiorly. Fundoscopic examination was almost impossible at this time, although a fundus reflex was not obtained. X-ray findings were negative. The parents were advised that this was a congenital abnormality of the eye and the patient was periodically seen over the next nine months.

During this time the deformity increased and the cornea became more cloudy and there was a bulging of the inferior fornix. Because of the rapid deterioration of this eye, it was felt that enucleation would be advisable. This was done on February 16, 1955.

Figures 2 and 3 show the artist conception of the enucleated eye. On transillumination a coloboma was observed in the iris at the six o'clock position. This coloboma was seen to continue through the ciliary body and the anterior choroid as a delicate line where the uvea had failed to fuse. In the equatorial region inferiorly the colcboma becomes much larger, fanning out towards the optic nerve. In the lower temporal quadrant beneath the insertion of the inferior oblique is seen a large ectatic area in the sclera. This area coincides with the largest portion of the coloboma of the choroid observed on transillumination. This defect, of course, represents cyst formation through the sclera. On section of the

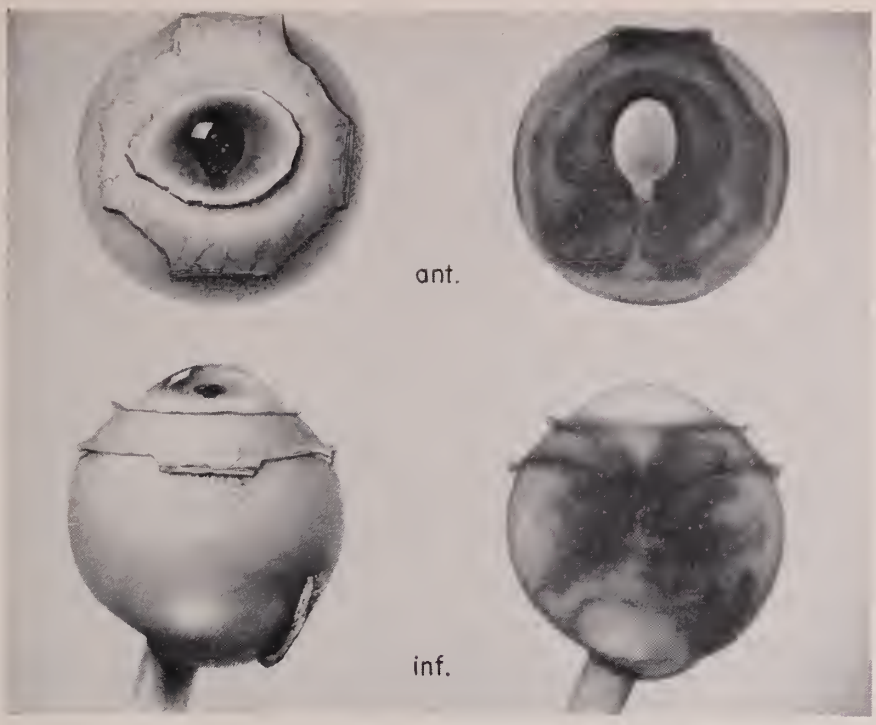


Fig. 2. Anterior and inferior views of enucleated eye, showing artists conception of eye on transillumination.

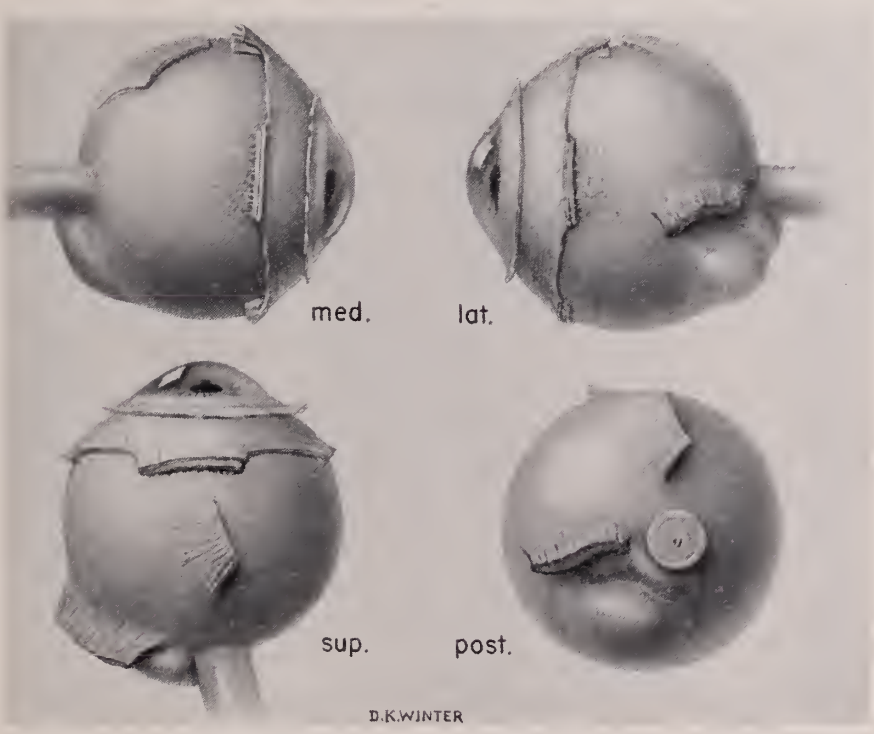


Fig. 3. Further views of enucleated eye.
Pictures courtesy of Armed Forces Institute of Pathology, Walter Reed, Army Medical Center.

eye (not shown) it was found that the retina was completely detached except along the margins of the coloboma where it was fused with the sclera. The choroid and ciliary body were intact except in the area corresponding to the coloboma. A slight conical projection on the posterior surface of the lens was also present.

The microscopic findings confirmed the presence

of an extensive coloboma involving primarily the uveal tract and retinal pigment epithelium. The retina in the area of the most marked defective fusion had herniated into the sclera and proliferated there. In this area there were seen many islands of degenerating and regenerating retinal tissues within the sclera and in the episclera. A marked deformity of the scleral aperture was also present. The retina had also herniated and proliferated into this region. Irregular cystoid spaces were present within the sheaths of the optic nerve, and no well developed optic nerve tissue was present.

This case represents an arrest in the closure of the fetal fissure at approximately four to five weeks stage of embryonic life.

SUMMARY

A case of congenital microphthalmos with cyst formation is presented along with the pedigree of this case which suggest recessive transmission of this defect. The other modes of transmission of microphthalmos are briefly considered.

Pathological findings courtesy of Armed Forces Institute of Pathology, W. M. Silliphant, Captain, M.C. USN, The Director, and Lorenz E. Zimmerman, M.D.

Bibliography

Barber, A. N.: Embryology of the Human Eye. The C. V. Mosby Company, 1955.

Falls, H. F.: Congenital and Hereditary Eye Disease. Nat. Soc. Prevent. Blindn., Inc. Pub. # 496.

Ladenheim, J. & Metrick, S.: Congenital Microphthalmos with Cyst Formation. Am. J. Ophth. 41: 1059-1062, June, 1956.

Macklin, M. T.: Hereditary Abnormalities of the Eye. III. Anomalies of the Entire Eyeball. Canadian M.A.J. 17: 327-331, 1927.

Robinson, W. P.: Congenital Anophthalmos. Am. J. Ophth. 39: Mar. 1955.

Stocker, L. L.: Microphthalmia. Kresge Eye Inst. Bull. 3: 64-66, Feb. 1952.

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Drug Coding System

A coding system which will aid in the identification of drugs by reference to their physical characteristics is being developed by the American Medical Association. The identification system relies solely on such characteristics as size, shape, color, scoring, and similar features of tablets and capsules, according to an announcement in the AMA News.

Through its use, physicians, attendants in hospital emergency rooms and poison control centers, law officers, pharmacists, and medical examiners will be able to narrow down a drug's identity to a relatively few products in a short time. Then chemical tests can be made to confirm the identity of the drug.

The new process is the result of several months study of 500 tablets and capsules by John J. Hefferren, Ph.D., of the A.M.A. chemical laboratory.

The project was launched because the chemist have been asked frequently to identify quickly various tablets and capsules, and the only way in many cases was by chemical analysis—often a long-drawn-out process.

Under the new system, an investigator first notes all the physical characteristics of the unknown drug by means of a reference chart. He then consults a long list of tables which are classified as to types of drugs listed. When he finds a given set of characteristics describing the unknown drug, he makes chemical tests which will permit further differentiation and final identification.

In some instances—when letters or designs appear on the drug—immediate identification can be made.

Dr. Hefferren is gathering thousands of drug samples which will be defined, described, measured, and classified.

It is hoped that a text, listing about 5,000 products, can be published in about a year. It will later be expanded to include many more products and be kept up to date by supplements and new editions.

Carcinoid Tumor of the Duodenum

Three Cases

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CARCINOID TUMORS rarely occur in regions of the gastrointestinal tract other than in the appendix. However, the appearance of these neoplasms within the duodenal segment is infrequent enough to be regarded as a curiosity. Barnes and Young[1] reviewed the world's literature and found only 26 cases of carcinoid tumors of the duodenum. Two cases of their own made a total of 28 cases. Twenty-four cases of neoplasms of the small intestine were found at the University of Virginia Hospital from 1932 to 1958. It was surprising to find that three of these represented carcinoid tumors of the duodenum. Because of the scarcity of such lesions, detailed reports of these cases are presented.

Case 1—(*L.T.D.*) This 45-year-old white male was admitted to the University of Virginia Hospital on November 20, 1956, with a four-months' history of dull aching, epigastric pain which was intermittent, unrelated to meals, diet, or antacids. The pain never radiated, lasted from twenty minutes to several hours and occasionally awakened him at night. There was a weight loss of seven pounds over the last six months with no diminution of appetite, no melena, hematemesis or icterus. A gastrointestinal series performed in July and again in October, 1956, demonstrated a discrete, rounded defect in the duodenal bulb. One month prior to admission he noted occasional sensation of gaseous distension and nausea postprandially but experienced no vomiting.

On admission, the only abnormal findings on physical examination were those of moderate emphysema secondary to sciliosis and pulmonary fibrosis.

Laboratory work was within normal limits with an hematocrit of 47. A gastrointestinal series demonstrated a polypoid mass in the duodenal bulb associated with considerable pylorospasm (Fig. 1). A chest x-ray showed emphysema and fibrosis secondary to sciliosis.

On November 23, 1956, the patient was explored through an upper right rectus incision under epidural spinal block. Complete exploration of the peritoneal cavity was negative except for a nodule measuring 1.15 cm. in the first portion of the duodenum just distal to the pylorus. The duodenum was opened along the anterior wall to reveal a papillary lesion of firm consistency protruding into the lumen. The mucosa overlying this lesion appeared intact and a careful search revealed no local or distant metastasis. The lesion was excised with a button of normal-appearing duodenal wall and the resulting defect was closed transversely with a continuous inverting suture of triple zero chromic catgut. The patient's postoperative course was uneventful and he was discharged on the seventh postoperative day.



Fig. 1—Demonstration of a rounded filling defect in the first portion of the duodenum on a gastrointestinal series.

The pathology report was carcinoid tumor of the duodenum. The microscopic findings were characteristic of a benign lesion with no mitotic figures. It was reported as having been completely excised.

From the Department of Surgery, University of Virginia School of Medicine, Charlottesville, Virginia.

Follow-up examination to date revealed the patient to be well with no evidence of recurrence.

Case 2—(*R.D.M.*) This 48-year-old white female was admitted to the University of Virginia Hospital on June 8, 1949, with a history of an exploratory laparotomy performed four years previously elsewhere because of persistent epigastric pain associated with nausea and vomiting. She stated that a large ulcer was discovered but that no definitive procedure was carried out. She was well until three and a half months prior to admission when she again developed epigastric pain, nausea and vomiting.

Physical examination on admission was negative except for slight tenderness in the right upper quadrant. Laboratory studies were within normal limits. A gastrointestinal series demonstrated a deformed duodenal bulb which was quite spastic and an active duodenal ulcer was suspected. Surgical treatment was indicated because of the degree of obstruction. At exploration, the duodenal bulb was noted to be deformed and accordingly a subtotal gastrectomy was performed.

On gross pathologic examination, two ulcers in the duodenum, one measuring 1 cm. and the other 1 2 cm., were reported. On microscopic examination one segment of the duodenum demonstrated the presence of a collection of cells packed in rather compact masses and surrounded by connective tissue. The cells were somewhat hyperchromatic but noted to be regular in size with no mitosis. The diagnosis was carcinoid tumor of the duodenum appearing incidentally with two benign duodenal ulcers.

The patient did well until four years later when she developed typical ulcer symptoms with some melena. A marginal ulcer was demonstrated on gastrointestinal series. At operation for correction of this lesion, no evidence of recurrence of the tumor was noted.

Case 3—(*L.M.C.*) This 51-year-old white female was admitted to this hospital on February 24, 1958, with a history of having had an abdominal perineal resection for carcinoma of the rectum in 1944 and excision of a recurrent nodule in the perineal wound in 1945, both of which were performed at this hospital. She had done well until two weeks previous to this admission when she noted the onset of jaundice without pain. In addition, there was a 10 pound weight loss.

Physical examination on admission was negative except from herniation about her sigmoid colostomy and the presence of marked icterus.

Laboratory data revealed an hematocrit of 34. The urine was positive for bile. Van den Bergh was positive direct and 4.8 mm. indirect. The alkaline phosphatase was 20 Bodansky units. Thymol turbidity was 2.6. The stool was negative for blood.

Exploration of the abdomen revealed a large distended gallbladder and a dilated common bile duct measuring 2.5 cm. in diameter. Palpation revealed a mass which felt like an indurated ulcer in the second portion of the duodenum. This was interpreted as a probable carcinoma of the ampulla of Vater. A pancreatic duodenectomy was performed. Upon opening the duodenum, a mucosal tumor measuring 3 x 2 x 2 cm. was found which had not penetrated through the serosal surface. Microscopic study revealed a carcinoid tumor arising from the duodenum.

The patient is reportedly doing well at present with no evidence of recurrence.

DISCUSSION

Dockerty[2] states that while 90 per cent of all argentaffin tumors occur in the appendiceal region and may be regarded as benign lesions, the other 10 per cent, which may occur at any point along the gastrointestinal tract, should be considered malignant. In a review[2] of 565 cases of carcinoid tumors in portions of the gastrointestinal tract exclusive of the appendix, it was found that the majority (396) of these lesions appeared in the ileum, 13 in the jejunum and 10 in the duodenum. Of 25 carcinoid tumors of the stomach, 25 per cent were noted to demonstrate metastatic lesions; 75 per cent of the tumors of the small intestine demonstrated metastasis. Barnes and Young[1] found evidence of metastasis in only three of the known 28 cases. Our three cases, making a total of 31 cases, would make an expected incidence of metastasis of 10 per cent when the tumor is found in this location. Approximately one-half of the duodenal carcinoid lesions reported in the literature was symptomatic while the other half was asymptomatic and discovered incidentally at operation or autopsy. Of our three cases, two lesions were symptomatic and the third was an incidental operative finding.

Argentaffin tumors of the duodenum, as elsewhere in the gastrointestinal tract, manifest themselves primarily by producing obstructive symptoms. The mucosa overlying the tumor is usually intact and bleeding is not ordinarily associated with these lesions. Characteristically, they appear as a submucosal nodule which, on sectioning, is pale yellow

and firm. If obvious metastatic disease is not present, differential microscopic diagnosis between benign and malignant tumors of this type is notoriously difficult. Even those tumors which are widely disseminated throughout the peritoneal cavity may have an unvarying microscopic picture with or without mitotic figures. However, extension through the wall of the serosa is fairly good evidence that the tumor is malignant. Because of well-documented reports of long survival in patients with proven metastatic disease, it behooves the surgeon to make every attempt to remove all traces of this tumor. Barnes and Young reviewed the case of a patient who was known to have a metastatic tumor of the liver for 14 years which was proven by biopsy six years prior to death (of unrelated causes) to be a metastatic carcinoid tumor arising within the duodenum. Resection should include multiple nodules of the liver as well as local and regional metastasis. If the lesion appears to be a localized nodule in the duodenum, the procedure of choice appears to be local excision with an adequate margin of duodenal wall. To our knowledge, there are no cases of carcinoid tumors of the duodenum in which the "carcinoid syndrome" as described by Thorson[3] could be applied to a lesion of the duodenum.

CONCLUSIONS

Three cases of carcinoid tumor of the duodenum have been presented. Two cases had symptoms and signs referable to the lesion and the third was an incidental finding following subtotal gastrectomy. There was no evidence of metastasis on followup examination of these patients.

Bibliography

1. Barnes, Z. B., and Young, J. M.: Carcinoid Tumors of the Duodenum. Surgery 40: 922-928, 1956.
2. Dockerty, M. B.: Carcinoids of the Gastrointestinal Tract. Amer. J. Clin. Path. 25: 794-795, 1955.
3. Thorson, A., Biork, G., BJorkman, G., and Waldgnstrom, J.: Malignant Carcinoid of the Small Intestine with Metastases to the Liver, Valvular Disease of the Heart (Pulmonic Stenosis and Triscuspid Regurgitation without Septal Defects), Peripheral Vasomotor Symptoms, Bronchoconstriction, and an Unusual Type of Cyanosis. Am. Heart J. 47: 795-817, 1954.
4. Ackerman, L. V. del Regato, Juan A.: Cancer, 2nd Edition. C. V. Mosby, St. Louis, Mo., 1954.

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"Largest Television Set"

The largest and most advanced compatible color TV "set" in the world—a 1500-pound electronic projector capable of presenting pictures 9 by 12 feet —has been built in the Netherlands for use at U. S. medical meetings.

The projector, which will be put into full use next year, had its U. S. tryout December 2-5, when Smith Kline & French presented 15 hours of closed-circuit medical color TV at the American Medical Association's clinical meeting in Minneapolis.

Built by the famed Holland electronics firm of Philips, the device is actually three projectors in one. Each projector sends a different color onto the screen. Overlapping of graded images in the primary colors provides the shadings and variations seen on the screen.

When Smith Kline & French Laboratories, Philadelphia pharmaceutical firm, pioneered medical color television more than nine years ago, the only viewing equipment consisted of 10-inch home-style screens. Later, Smith Kline & French utilized U. S.-built projectors capable of pictures 4 by 6 feet. The larger the picture, however, the less brilliant the projected image—hence SKF's search for an improved projector that would provide both brilliance and large screen-size.

The Philips unit can project pictures four times larger or three times brighter than the most advanced compatible color TV equipment manufactured in the U. S. The improvement in brightness and size may make it possible to view medical color television in normally-lit convention auditoriums.

The Smith Kline & French projector will be part of SKF's Mobile Medical Color Television Unit, which travels 25,000 miles annually. Modifications for the projector's U. S. use were designed by North American Philips Co. Inc. and the SKF crew.

Cardiac Arrest And Resuscitation Twice On The Same Patient

E. E. MIHALYKA, M.D.
A. M. ZIPPERT, M.D.
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MORE AND MORE ATTENTION is being focused on the possibilities of cardiac arrest and resuscitation. There are only a few published cases whereby the patient had cardiac arrest outside of the operating room, and recovered with proper and adequate restitution of the oxygen system and cardiac resuscitation.[1,2,3,4]

Today, there are thousands of operations being performed in thousands of hospitals and it behooves everyone to know what to do immediately when a patient attains cardiac arrest or ventricular fibrillation. A survey covering the Crile Veterans Administration Hospital in Cleveland, Ohio, revealed that there were approximately 13,659 surgical procedures during the period of 1953 through 1956, and of this total number of procedures, there were nine cardiac arrests which, when broken down, revealed a rate of one out of every 1,417 operative procedures. The survey revealed the following information:

> The ages of each patient—sixty-three year old white male, fifty-seven year old colored male, forty-one year old white male, fifty-three year old white male, thirty-nine year old white male, twenty-four year old white male, forty-one year old white male, sixty-two year old white male, forty-four year old colored male.

In each instance, the onset of cardiac arrest was in the operating room. Two of the nine patients who had cardiac arrests and immediate cardiac resuscitations are living today. The others have expired from various periods extending from post-operative cardiac arrest up to four months post-operatively.

The procedure must, of necessity, be carried out immediately upon satisfaction to the surgeon or surgeons in the immediate vicinity of the patient that no pulse, blood pressure, or heart sounds are present. There is no time for four or five people to come to the conclusion that the patient should be resuscitated. Courage is most important at this particular point, when the patient is in cardiac standstill, and the surgeon must immediately make the necessary incision and, concomitantly, necessary steps must be made to restore the oxygen system to the body. One without the other is of no use to the patient. Oxygen restitution is foremost, because irreparable cerebral damage is done if there is lack of oxygen for a period of time longer than approximately four minutes. Oxygen routed to the system via one hundred per cent oxygen mask, the oxygen nasal catheter, intratracheal tube, or if necessary, mouth-to-mouth breathing, and the removal of accumulated CO_2 accomplishes the necessary ventilation.

PRESENTATION OF A CASE

A sixty-three year old white male was admitted to Crile Veterans Administration Hospital on May 7, 1956, with the chief complaint of hoarseness of more than one year's duration. The patient also noted a large lump arising in the right anterocervical region of his neck during the two weeks prior to admission. The patient had been treated for questionable tuberculosis in 1920 and 1940 at a tuberculosis hospital in New York State. The patient's past medical history reveals that he had a hemorrhoidectomy in 1936, and the inactive tuberculosis for which he had been hospitalized both in 1920 and 1940.

Physical examination at this time, revealed a sixty-three year old, thin, pallid, not too well nourished white male, with obvious hoarseness. There was a palpable mass in the right anterior cervical region, approximately one inch in diameter which was non-tender, somewhat firm, non-nodular, and mobile. The abdomen was protuberant, soft, and non-tender, and the patient had a right indirect inguinal hernia which was easily reducible. The heart revealed a regular irregularity of rhythm, but there was no enlargement to percussion of any other

From the Crile Veterans Administration Hospital, Cleveland, Ohio.

abnormality irregularity. Indirect laryngoscopy revealed an easily friable, granular mass, which covered the anterior two-thirds of the left true vocal cord, and which appeared to extend about 1.5 centimeters subglotically. Laboratory studies revealed a white blood cell count of 11,500 with a differential count of 69 neutrophils, 10 monocytes, 17 lymphocytes, 2 eosinophils, and 2 basophils. Hemoglobin was 14.35 grams. VDRL was negative. Bleeding time, one half minute; coagulation time, five minutes. *Blood was Rh positive.* Urinalysis was normal. Hematocrit was forty-five per cent, blood urea nitrogen was 17.2. X-ray revealed the chest to be somewhat emphysematous in type, a mild elongation of the aorta, blunting of the left costophrenic sinus. There was no evidence of any active pulmonary disease. The skeletal survey revealed a small fusiform aneurysm of the abdominal aorta which was calcified. There was a moderate hypertrophic degenerative change of the lumbar spine, but there was no evidence of skeletal metastases. The patient had a complete cardiological workup and the electrocardiogram revealed a normal record preoperatively except for a marked sinus arrhythmia.

On May 9, 1956, the patient had a direct laryngoscopy and biopsy, the result of which was moderately well differentiated squamous cell carcinoma of the left true vocal cord with metastases.

On May 22, 1956, the patient was prepared for a total laryngectomy and a left radical en block neck dissection. Pre-operatively, the patient had atropine sulfate grams 1/150, demerol 100 mgs. Both of these were given forty-five minutes preoperatively, and he had seconal grains 1 1/2 on May 21, 1956, at night time prior to going to sleep, and again at 6:45 on May 22, 1956. The patient had sodium pentothal, gas, oxygen, ether anectine type anesthesia, and was intubated. While the patient was being prepared for the radical neck dissection, suddenly his blood pressure dropped to zero, pulse stopped, and there were no heart sounds. Immediately, a circumlinear thoracotomy incision, which was bloodless, was made in the fifth intercostal space extending from the sternum to the midportion of the axillary wall, and the hand was thrust into the chest cavity and the heart, which was in standstill, was grasped and in rhythmic manner, the massaging of the heart was started. Simultaneously, one hundred per cent oxygen was switched on into the intratracheal tube. Approximately thirty-seven seconds later, the heart resumed its normal rhythmic beat. No drugs were used to help resuscitation in this particular instance. The Finochietto chest retractor was inserted and the heart beating was observed and the patient's chest was left open for approximately forty minutes. Electrocardiogram was instituted which revealed a return from a cardiac arrest to a normal sinus arrhythmia. Blood pressure returned to 75/55 mms. of mercury. Prior to closure of the chest, the entire field was completely redraped with sterile drapes. The left hemithorax was lavaged with one per cent neomycin solution. A thoracotomy tube was inserted and attached to the under water suction apparatus. Approximately two hours later, the blood pressure returned to 90/60 mms. of mercury, and the ventricular rate was seventy-six. The incision was closed with #0 chromic catgut, and just prior to final closure, the lungs were re-inflated. The skin was closed with #0000 interrupted black silk. The patient was then removed to the recovery room after approximately two hours in the operating room itself.

The post-operative events revealed that at approximately 2 p.m. of the same day, the patient had subcutaneous emphysema over the left upper chest area, and a second thoracotomy tube was inserted into the anterior left third interspace, via trochar and the patient seemed to improve. On May 31, 1956, all the sutures were removed. The patient's remaining convalescent period was uneventful. After talking with the patient and his family, it was decided that a second attempt at total laryngectomy and left radical neck dissection should be made.

Accordingly, on June 5, 1956, the patient was properly draped and prepared and this time, having atropine sulfate grains 1/75, and morphine sulfate grains 1/4, approximately forty-five minutes preoperatively, and seconal grains 1 1/2 on June 4, 1956, at night, and again one hour prior to surgery on June 5, 1956. This time, the electrocardiograph was attached to the patient prior to any surgical attempt and having everything ready, the patient had just started to be intubated. The blood pressure vascillated around 50 and the pulse vascillated very irregularly between 58-160 when suddenly again he went into cardiac arrest with the blood pressure and the pulse dropping to 0 which was immediately noted. The electrocardiogram showed cardiac arrest and in approximately six to ten seconds, it was decided that the emergency shock procedure should be instituted with elevation of both lower extremities and the patient was very rapidly intubated and one hundred per cent oxygen was instituted. Heavy pressure and chest pounding over the left portion

of the chest was employed. The patient came back from cardiac arrest without any surgical or medical intervention in approximately ten to fifteen seconds.

The patient was again observed in the recovery room, and apparently again recovered without any cerebral damage this time as in the previous procedure. The patient was observed for approximately two hours, and monitored with electrocardiogram monitoring machine with the electrocardiogram again returning to sinus arrhythmia. It was felt that after having had two surgical attempts, this patient should be treated by x-ray therapy. The patient had a total of 4472r's to the right oblique neck region, and a total of 4472r's to the left oblique neck section. The patient was discharged from the hospital on August 9, 1956, without any apparent cerebral involvement. The patient has been followed at monthly intervals at the Nose, Ear, Throat Follow-Up Clinic and so far, the patient's overall general condition seems to be somewhat improved. The hoarseness is still present. The patient has not gained or lost any weight, but is able to carry out a somewhat seminormal life.*

CONCLUSIONS

In the surgical service of Crile Veterans Administration Hospital during the years of 1953 through 1956, there have been 13,659 surgical procedures. Of this number, there have been nine cardiac arrests and with cardiac resuscitation done in the operating room itself. Of the nine, two are still living, one of the patients had two cardiac arrests with successful resuscitations in both instances.

It is felt that surgeons, anesthetists and medical personnel should be able to handle cardiac arrests, be it in the operating room, or in the immediate vicinity of the operating room.

*This patient survived two cardiac arrests with successful resuscitation, only to be killed recently in an automobile accident.

References

1. Dale, W. A.: Cardiac Arrest: Review and Report of 12 cases. Ann. Surg. 135: 376-393 (March) 1952.
2. Beck, C. S.; Weckesser, E. C.; and Barry, F. M.: Fatal Heart Attack and Successful Defibrillation: New Concepts in Coronary Artery Disease. J.A.M.A. 161: 434-436 (June 2) 1956.
3. Mozen, H. E.; Katzman, R.; and Martin, J. W.: Successful Defibrillation of Heart: Resuscitative Procedure Started on Medical Ward and Completed in Operating Room. J.A.M.A. 162: 111-113 (September 8) 1956.
4. Brown, C. D.; Knudson, J; and Schroeder, G. F.: Cardiac Arrest at Work: Penknife Thoracotomy with Recovery. J.A.M.A. 163: 352-353 (February 2) 1957.

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New Booklets by Heart Association

In order to help patients with sodium-restricted diets follow the doctor's diet prescription, the American Heart Association has prepared three booklets —"Your Mild Sodium-Restricted Diet," "Your 1000 Milligram Sodium Diet," "Your 500 Milligram Sodium Diet," Dr. George S. Grier, III, Newport News, President of Virginia Heart Association, has announced.

These booklets, intended especially for adult heart patients placed on a sodium-restricted diet by their physicians, are available free of charge from Virginia Heart Association, 12 South Third St., Richmond 19, Va., to physicians for distribution to patients. They are not available to patients without the approval of the patient's physician.

These booklets provide food lists that enable the patient to vary his meals as he becomes familiar with his basic diet plan. Weight watching, meal planning, and problems of the family cook are discussed and practical suggestions on eating out and shopping for food are given. Many people, according to the booklet, are confused about the difference between sodium and salt.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

More About Utilization

In the November issue of the Virginia Medical Monthly this special Pre-Paid Medical Care page[1] made two suggestions: that the medical profession become actively engaged in advising the public of the numerous medical and demographic reasons why the rate of utilization of pre-paid health care services is increasing, and that the medical profession become actively engaged in eliminating any misuse —injudicious utilization—of those services.

It is tremendously important to the continuance of our free-enterprise system of providing medical care that the public be made fully aware of the medical profession's solicitous interest in the cost of prepayment—as evidenced by its organized, efficient controls over misuse of prepaid benefits[2]—because the public now is all too prone to believe that the profession is rather gleefully "killing the goose that lays the golden eggs". It is of concomitant and equal importance that the public be made fully aware that the recent, dramatic increase in usage of prepaid benefits is not all "bad"; that, from the point of view of public health, the most part of the increase is "good"; that the resultant increase in prepayment rates does not alter the fact that prepayment for health care services remains the best bargain on the American market.

Today's increased demand for health care services goes along with today's higher level of income and improved standard of living. The rising standard of living of the American public has incorporated adequate health care as a usual and expected part of living. Today it is truly proper to believe that patients have prepayment because they want to use hospitals' and doctors' services—not that patients use these services just because they have prepayment. The utilization experience of those who have no prepayment is strong evidence that demand for health care is increasingly a part of the way of life in the United States—and coincidental to prepayment. *This past year the uninsured segment of the population had a hospital admission rate more than twice that of all the population twenty-five years ago.*[3]

Another way to demonstrate that the public is not after a free ride at the expense of prepayment plans is to examine public usage of medical items which are not covered by prepayment. One such item is prescription sales in drug stores. Prescriptions give a good index since they can be obtained only from a doctor, are almost never a benefit of prepayment, and occur outside the hospital. The American Druggist Magazine reports that in 1957 prescription sales by drug stores totaled $1.7 billion, nearly four times the total for 1947. Such a fantastic increase in the out-of-pocket expenditures for one aspect of medical care should offer some proof that the American people are primarily concerned with health care for its own sake and not as a means of beating the prepayment game.[4]

As voluntary hospitals have improved their methods and devices for treating patients, more people have been using the improved care. Thirty years ago, people went to the hospital only when seriously ill or injured. Today, to be hospitalized is proper medical practice for scores of health conditions which once could not be treated at all and for others that were treated in the home at great hazard. It has been well said that people now go to the hospital to live—not to die, as they once did. No one can argue that proper increase in use of hospital facilities should be discouraged. Needed hospitalization contributes to better individual health and to higher health standards for all.

It is unfortunately true—and a reflection on the medical profession—that some cases admitted to hospitals do not need to be admitted. But criticism is easy, and the situation is far from simple. Health care is in a process of transition; what constitutes proper hospitalization, how the health of a patient can best be served, how best to raise public health standards—professional concepts in these matters are undergoing changes. The need in each individual case is a subject for scientific determination. The patient suspected by his physician of having hepatitis may seem to a lay person quite well enough to remain in bed at home; on the other hand, few physicians would want to risk the serious consequences of this illness through failure to make use of the firmly controlled conditions the hospital provides.

It is a duty of all engaged in health work today

to take strong, positive measures to stop any misuse there is. Blue Cross is helping in this effort. Also, the Richmond Blue Shield Plan is developing an optional endorsement to provide coverage of diagnostic studies for ambulatory patients. One purpose of this coverage is to eliminate the incentive for unnecessary admission as an inpatient just so the subscriber may have his Blue Cross-Blue Shield protection. Besides eliminating the incentive for unnecessary inpatient hospitalization, provisions for diagnostic studies of ambulatory cases will widen the scope of prepayment budgeting for the community. More health care can be budgeted for, and there will be better health as a result.

But Blue Cross-Blue Shield cannot do the job alone. There must be activity on the part of responsible physicians, and acceptance by them of the key role physicians must play as the group professionally prepared to police effective controls over utilization. Hospital leaders, whose concern is a matter of record, must cooperate with physicians in devising and maintaining practical methods of control over admissions and length of stay. The insistence of the general public that utilization be safeguarded should be a spur to effort on the part of other interested groups. Blue Cross-Blue Shield, with their direct and primary responsibilities to the people, are anxious to participate fully with others to make certain that hospitalization prepayment covers all necessary use but no unnecessary use of hospitals.

Whatever misuse of hospitals exists is an injurious cross current in the gathering stream of better health for everyone, and its force must be broken. But the public must not be misled by a subordinate fault from understanding the primary nature of modern health care. The central truth to be recognized is that health services are being utilized more because they now have more to offer and because doctors and the public together are developing a health standard that properly includes the use of these services.

References

1. Virginia Medical Monthly 85: 644, November, 1958.
2. Virginia Medical Monthly 85: 509, September, 1958.
3. Brown, Ray E.: Forces Affecting The Community's Hospital Bill. Hospitals 32: 51, October 1, 1958.
4. Ibid.

Polio Vaccination During Pregnancy

Polio vaccination during pregnancy is important because it serves two purposes: combating the "extraordinary susceptibility" of pregnant women to the disease, and prolonging their infants' passive immunity.

These were the conclusions of five University of Minnesota researchers who studied 138 pregnant women. Their study is reported in the September 6 Journal of the American Medical Association.

More than 65 per cent of the women were found to be incompletely protected against the disease. After receiving two Salk vaccine shots during pregnancy, the proportion dropped to 18 per cent.

Before receiving the shots, 33.1 per cent showed immunity to all three polio viruses; 58.6 per cent to one or two types, and 8.3 per cent to none. After the shots 82 per cent were immune to all three types.

The study also indicated that vaccination during pregnancy lengthened immunity in newborn infants. Newborn infants are resistant to certain diseases as a result of receiving antibodies (agents which fight disease in the body) from a mother who has been immunized by natural infection or previous vaccination. The duration of immunity depends on the amount of antibody present. The higher the antibody level the longer the immunity lasts. By vaccinating the mother, her own antibody level—and her infant's—is raised.

The study showed that the infants eliminated about half of the polio antibodies received at birth within five weeks. The length of immunity resulting from the remaining antibodies depended on the original antibody level. Some infants still showed some immunity at nine and 12 months of age.

The authors are Dr. Mauricio Martins da Silva, Dr. Konald A. Prem, Eugene A. Johnson, Ph.D., Dr. John L. McKelvey, and Dr. Jerome T. Syverton of the University of Minnesota Medical School, Minneapolis.

Current Currents

SPECIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES OF THE AMA

DR. W. LINWOOD BALL, Richmond, has been appointed to the Board of Trustees of the American Medical Association to fill the vacancy caused by the recent death of Dr. Warren Furey of Chicago. Dr. Ball is also Vice-President of AMA.

RESPONDING TO A CALL FOR ACTION in meeting the health care needs of the aged, the House of Delegates adopted the following proposal submitted by the Council on Medical Service and endorsed by the Board of Trustees:

> "For persons over 65 years of age with reduced incomes and very modest resources, it is necessary immediately to develop further the voluntary health insurance or prepayment plans in a way that would be acceptable both to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens.
>
> "Therefore, the Council on Medical Service recommends to the House of Delegates the adoption of the following proposal: That the American Medical Association, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income; that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate."

THE REPORT OF THE COMMISSION ON MEDICAL CARE PLANS, long awaited by physicians over the country, was discussed long and thoroughly during a reference committee hearing. The House, however, decided to defer action until the June, 1959, meeting. The following statement was adopted:

> "We respectfully suggest to the constituent associations reviewing the report in the interim, that their attitude regarding the report will be clarified if they arrive at some decisions in regard to the following basic points:

"1. *Free Choice of Physicians*—Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable and essential to good medical care without qualification?

"2. *Closed Panel Systems*—What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?

"These suggestions acknowledge that the policy of the American Medical Association to encourage and support the highest quality of medical care for all patients remains unchanged. They question, however, whether attitudes toward the free choice of physician and the closed panel system may be undergoing evolutionary change."

OSTEOPATHY received its share of attention and considerable study was given a resolution which would have asserted the right of constituent medical associations to establish the relationship of the medical profession to the osteopathic profession within their respective states. The House, however, decided that the resolution did not offer the appropriate solution to the problem. The Judicial Council was requested to review past pronouncements of the House on osteopathy and the status of the laws of the various states in this regard. The Council was requested to present its report and recommendations at the June, 1959, meeting.

THE DEVELOPMENT OF ADDITIONAL FACILITIES for basic medical education was urged by the House in approving a statement by the Council on Medical Education and Hospitals. It was pointed out that "American medicine fully recognizes the needs being brought about by the increasing population, social and economic trends, and the changing dimensions of medical knowledge and its application."

THE BOARD OF TRUSTEES was requested to arrange a top-level conference with voluntary health agencies, United Funds and other parties interested in the raising of funds for health causes, with a view toward resolving misinterpretations and other difficulties.

* * *

STATEMENTS for 1959 membership dues in The Medical Society of Virginia have been mailed. Statements for AMA dues will be mailed about March 1.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Handling Poisoning Emergencies

Public health personnel and the medical profession as a whole have become more conscious of the need for efficient handling of poisoning emergencies and have taken steps to educate the public along these lines. About a year ago the Committee on Toxicology of the American Medical Association published an excellent report on how the general public should handle a poisoning emergency.[1] It is fortunate that a large number of these emergencies involve relatively small amounts of comparatively harmless materials. It sometimes happens that a potentially toxic substance is ingested and prompt medical care is needed. This care is frequently given in the emergency rooms of a hospital and, in order to render this service efficiently, a Cleveland (Ohio) hospital made all the necessary material for treating poisoning emergencies easily available to the emergency room staff.[2]

A movable locked cart was designed to contain all of the agents needed in treatments. A table lists all the drugs, apparatus and books that are kept in the cart. The books are up-to-date reference text books that help to answer questions that arise in a poisoning situation both as to the chemical composition of household products and the therapy needed to counteract them. With all the drugs and equipment at hand in one spot, there is no need for scurrying and confusion and the situation can be handled with dispatch.

A Committee of the Cleveland Academy of Medicine has recommended that, in addition to the fully equipped poison antidote cart, there be a protocol to guide the house officers of a hospital in the proper handling of emergencies due to chemical poisonings. They advised that the patient's private physician be notified as quickly as possible. While getting in touch with him the patient must be treated symptomatically and the history of the situation obtained concomitantly. It is necessary to know the name and composition of the poison, the amount ingested, the time of ingestion, and what treatment, if any, has already been given. Emesis is to be induced if not more than four hours have elapsed since the ingestion and if the poison was not an acid, an alkali, or a volatile hydocarbon, and if the patient is conscious. Emesis is preferable to gastric lavage. If the latter is elected a large stomach tube is recommended for lavage. The vomitus or lavage, or both, and a urine specimen if it can possibly be obtained, are to be saved for future examination. Consultants, their specialties, and their phone numbers are listed on a separate sheet and this sheet is posted on the antidote cart. The consultants are to be called when needed by the poison control officer or, if he is not available, by the resident. All patients with questionable cases, especially those with salicylate poisoning, such as aspirin or wintergreen, are to be admitted to the hospital.

An expert on poisons, Dr. Walter J. R. Camp, professor of pharmacology and toxicology at the University of Illinois, scolds people who rely on their memory to identify bottles of poison in the house. He points out that legitimate prescriptions are a common source of poisoning. Unused medications are hoarded and often are put to uses never intended by the physician. Labels may be disfigured or fall off. All unlabeled containers should be discarded. Poisonous substances should be kept in a locked cabinet. Insecticides should not be kept on shelves with food stuffs. All drugs should be kept out of reach of children.

Dr. Camp has seen such things happen as a family wiped out when sodium fluoride was stored in a container identical to one containing flour and was used to prepare pancakes. He believes that personal education can be very effective and he considers it the physician's duty to instruct his patients about the many toxic substances in the home. Community educational campaigns by local medical societies, health departments, poison control centers, and civic groups should reinforce these activities of the physicians.

Interest in the prompt and efficient treatment of patients who have ingested poisons has brought about the establishment of seven poison information centers in Virginia and other areas have expressed interest in setting up such centers. The location, telephone number, and name of the director of each of the already established poison information centers is listed on the following page.

Location	Telephone	Director
ARLINGTON		
Arlington General Hospital	JA 8-6600	Dr. Wm. D. Dolan, Jr.
CHARLOTTESVILLE		
University of Virginia Hospital	2-2121	Dr. Julia E. Edmunds
CHRISTIANSBURG		
New Altamont Hospital	EV 2-2941	Dr. J. T. Showalter Dr. A. M. Showalter
NORFOLK		
Office of Chief Medical Examiner 427 E. Charlotte Street	MA 5-1306	Ramon A. Morano
PORTSMOUTH	EX 9-2441	
Portsmouth Naval Hospital	Ext. 200, 207 208, 613	Dr. F. B. Becker Commander, USN
RICHMOND		
Medical College of Virginia Hospital	MI 4-9851	Sidney Kaye, Ph.D.
ROANOKE		
Roanoke Memorial Hospital	5-7325	Wm. H. Flanagan

References

1. Recommendations of Committee on Toxicology on First-Aid Measures for Poisoning, report to the Council on Drugs. J.A.M.A. 165: 686-687 (Oct. 12) 1957.
2. T. George Bidder, M.D. and Irving Sunshine, Ph.D.: Efficient Handling of Poisoning Emergencies. J.A.M.A. 168: 514-516 (Oct. 4) 1958.

Monthly Report of Bureau of Communicable Disease Control

	Nov. 1958	Nov. 1957	Jan.-Nov. 1958	Jan.-Nov. 1957
Brucellosis	4	1	22	22
Diphtheria	7	3	31	20
Hepatitis	20	20	263	410
Measles	371	166	21851	5013
Meningococcal Infections	9	12	87	70
Meningitis (Other)	21	16	255	406
Poliomyelitis	24	5	146	103
Rabies (In Animals)	14	27	241	302
Rocky Mt. Spotted Fever	0	1	32	31
Streptococcal Infections	576	941	6445	6393
Tularemia	1	5	32	31
Typhoid Fever	4	3	42	42

Mental Health . . . .

CYRIL R. MILL, Ph.D.

Predicting Juvenile Delinquency

Like death and taxes, studies in juvenile delinquency, it seems, are always with us. Many of these studies, being rather narrow in their approach to the problem, fall into the error of over-emphasizing a "single cause". It is obvious to the unprejudiced observer that there must be many factors contributing to juvenile delinquency, several of which must be present in any individual case.

A fairly high degree of relationship has been reported between delinquency and inadequate housing, broken homes, first and second generation Americans, poor companionship, inadequate recreational facilities, educational failures, emotional disturbances, and mental retardation. Delinquency has also been found related to, but perhaps not "caused" by, body build, urban living, overcrowded home conditions, status as an only child or being one of a very large family, comic books, and tobacco, drugs and alcohol.

Just as there is no single cause for delinquency, so is the search for single remedial measures apt to be unprofitable. For example, additional parks, playgrounds, and recreational facilities are fine for normal children and should be provided in every community. The delinquent child, however, is apt to regard such facilities as "square" or "sissy" and will frequent them only to commit acts of vandalism or to break up whatever organized games are in progress. While psychotherapy may be of help to the delinquent whose pattern of behavior has developed on a neurotic basis, many delinquents falling in the class of character disorders remain highly resistant to this form of treatment.

One recent study suggests that the lower class attitude toward time is so different as to make communication with these individuals difficult. It was found that middle class time orientation is generally toward the future with plans being constantly made toward preparation for an uncertain old age. In these families a child is taught that he must get an education in order to get a job, must hold a job in order to buy a home and support a family and buy insurance, must preferably get work with a good retirement plan as part of the company policy, so that anxiety around providing for the future directs much of life's activities. The situation is quite different in the upper classes where the orientation is toward the past, a protection of the prestige and status which the family has long enjoyed. Among this group of persons the future is and always has been assured; the ruling dictum is to conduct one's affairs in such a way that one never need worry about "what would grandfather think"?

In contrast to these it was found that the lower classes of our society preferring not to think about the anguish, cold, and hunger of the past and living always in a situation where the future is uncertain and unpredictable, live entirely in the present. When money is available it is all spent on food or fuel until one is stuffed and overheated; existence is from day to day and next week is hardly to be thought of, next year not at all. It is possibly for this reason that the question so frequently asked of deprived and delinquent children, "what do you want to be when you grow up?" is met with a blank and uncomprehending stare as if one were talking nonsense.

It is generally agreed that in delinquency, as in other social and physical ills, early detection is advisable both for prevention and treatment. Is there any way that a delinquent can be spotted before he actually commits acts of violence or establishes a pattern of living which is resistant to change? Suggestion that prediction in this area is possible is provided in the study of Sheldon and Eleanor Glueck. In this study 500 delinquent children were carefully matched with 500 non-delinquents who came from the same socio-economic strata, from similar home backgrounds, and with equal intelligence levels. As many factors as possible were controlled, the only difference between the two groups of children being that one had been in frequent encounters with the law while the other group had not. The groups were then compared on many social, psychological, and psychiatric criteria, and were found to differ significantly in several ways.

1. The delinquent boys were largely deprived of affection by their fathers. While as a rule

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

they held warm feelings towards their mothers they found the father a brutal, sadistic, or inadequate person with whom they could not identify. It was also true that the delinquent children were largely rejected by their brothers and sisters with indifferent or hostile attitudes being prevalent. In discipline the delinquents' mothers were inconsistent and the fathers were inclined to be overstrict. Spankings and whippings were the usual methods used to cope with the misbehavior of the youngsters.

2. One of the most striking findings was that school misbehavior occurred in the delinquent group persistently and often seriously, at an earlier age than for the non-delinquent. This means before puberty. Truancy usually began before the age of ten. Teachers characterized the delinquent children as unreliable, inattentive, careless, lazy, untruthful, dishonest, tardy, attention seeking and disorderly. They were found to cheat and smoke and write obscene notes. They were bullies and cowards and often destroyed school materials. They usually wanted to quit school immediately and their vocational ambitions were usually childish, having to do with adventurous occupations or with work which required little training instead of trades and intellectual pursuits.

3. After school hours the delinquents on the whole sought out the more hazardous and adventurous jobs in which they were lacking protection from vicious street influences. They would sell papers rather than work as a store helper, for instance. A thirst for excitement was shown in excessive attendance at movies and showing a preference for playing in vacant lots, railroad yards, pool rooms, and the like. They showed active distaste for using playgrounds or staying at home. While they tended to join gangs they were usually delinquent children long before they were gang members. The gang activities only gave them greater scope. They preferred youth older than themselves as companions and used these older boys as their "ego ideal", as a substitute for the fathers who were unsympathetic or unsuitable as a model. They formed an early interest in the opposite sex and had sexual experience at an earlier age than the non-delinquents. This was possibly due to the lack of supervision rather than any constitutional difference.

4. The delinquents were far superior to the non-delinquents in their bodily measurements. They have a slower physical development, reaching puberty in the 13th to 14th year. In general they had an athletic build with a more harmonious and less disproportionate physique than the control group. There was no difference in the two groups in their health standing; the physical condition of both groups was good. It was found that the delinquents were reported to have been enuretic and extremely restless as small children.

5. In abstract thinking and generalizing the non-delinquents were stronger than the delinquents who preferred concrete tasks and objective materials with which to work. The delinquents' method of approaching a task was unmethodical, erratic, and they often seemed unrealistic thinkers, lacking in common sense.

6. When faced with a problem or a conflict the delinquents tended to resolve it by acting it out or giving overt expression to it in feeling or action. As a group they generally refused to take responsibility for their behavior, letting the pressure of feelings work itself off in direct action. They were little concerned with whether that behavior was criminalistic or otherwise.

7. Personality attributes included the finding that the delinquent children revealed in excessive amounts such traits as defiance of authority, resentfulness, hostility, suspiciousness and destructiveness. They were not inhibited by anxiety.

8. In the families there was evident a greater incidence of emotional disturbance, mental retardation, alcoholism, and criminalism. To the extent that the parents communicated the standards, ideals, and behaviour patterns of their own rearing to their sons, the social heritage of the delinquents was distinctly poorer than that of the non-delinquents. It is within the family emotional climate that the most deep-rooted and persistent character and personality traits of the growing child are developed. Here again the delinquents come off much worse than the other boys.

Three experimental schools in New York City are presently undertaking a project to check on the delinquency scales resulting from the Glueck study. It will be several years before their findings are generally available. In the meantime, one can use

the following quick guide as a rule of thumb. It is very probable that a child will develop a delinquent career if at the age of six or seven he

1. Is a Lone Wolf
2. Does not enjoy competitive games
3. Truants frequently
4. Seeks older companions
5. Probably is a reading problem—shows distaste for all school work except handicrafts
6. Is impulsive, possibly steals repeatedly
7. Shows only vague feelings toward mother; possibly fearful of father
8. Is always in the middle of excitement like fires, fights, accidents, or rough and dangerous play.

Active attention given to these children and their families at this early age can provide an effective program of prevention. Community services might be marshalled to see that they receive adequate medical care, and social services to guide the adults into employment, if necessary, and assist in other family problems. Psychological examinations can assist the schools in placing the children in the best educational environment. Counselling for the parents may correct ill-advised child-care practices.

In one instance known to the writer, a single conference between the child's teacher and mother resulted in marked change for the better. The mother had not noticed the effect which her working and being away from home during the afternoon and evening was having upon her seven-year old boy. When the problems were pointed out to her, she stopped work, had cookies and milk ready after school, and sometimes she and the boy went to the factory in the later afternoon to ride home with the father. In three months the boy's truancy and stealing had stopped and his grades and attitude in school improved.

In effect, what this mother did was to knit-up the ravelling threads of her family. Early detection and appropriate measures directed toward increased family solidarity can have a similar effect in many other cases of incipient juvenile delinquency.

Help Prevent Clots

Keeping a patient "walking" during surgery may prevent the formation of death-dealing blood clots, two Canadian surgeons have suggested. When movement in leg muscles is reduced—as during surgery—the blood pools in the legs and conditions are set for the formation of blood clots. By keeping the patient "walking" through the electrical stimulation of the leg calf muscles, this pooling is reduced. The stimulation causes the muscles to contract as they do in walking and to act as a pump, forcing the blood back to the heart. When clots form, parts of them may break off and move through the vessels, eventually blocking the artery between the heart and lungs. This condition, known as pulmonary embolism, frequently causes death. Pulmonary embolism is now the commonest single cause of death following major surgical procedures, Drs. John and Angus D. McLachlin said in the October Archives of Surgery, published by the American Medical Association.

They believe that blood pooling (venous stasis) in the legs is the prime factor in pulmonary embolism, although it has not been definitely proved. Prevention of pooling would lessen the possibility of clot formation.

The doctors have used skin electrodes similar to those used in the study of the heart's electrical activity. The electrodes are placed on the legs and the closed electrical circuit produces regular contractions of the calf muscles during the operation and until the patient is conscious enough to move about.

"There seems no doubt that blood can be kept moving in the legs in this physiological manner."

Since the role of venous stasis in pulmonary embolism is not definitely proved, "Only time and an adequate number of cases will let us determine whether keeping the 'peripheral venous heart' active during operative procedures will lessen the frequency of pulmonary embolism."

The authors are members of the department of surgery at the University of Western Ontario Faculty of Medicine, London, Ont.

The Medical Society of Virginia . . . .

Our New Headquarters Building

A Brief Case History

For a good many years The Medical Society of Virginia conducted its executive affairs in one or two rooms at the Richmond Academy of Medicine located at 1200 East Clay Street here in Richmond.

In 1946, the Society expanded its work with the employment of the late Mr. Henry S. Johnson as Director of Public Relations. The need for more adequate working space for its executives was soon apparent. In 1951, a building was purchased at 1105 West Franklin Street, and this became the Society's official headquarters. This structure, satisfactory in many respects, did not permit full utilization of modern aspects of medical association work.



Figure 1

A study committee composed of Dr. Guy W. Horsley, Chairman, Dr. Harry C. Bates, Jr., Dr. Fletcher J. Wright, Jr., Dr. Harold W. Miller and Dr. Ira L. Hancock, recommended that a new headquarters building be erected by the Society. This action was approved by Council, the House of Delegates and the membership at its Annual Convention in 1956.

The maximum sum of $120,000.00 was appropriated for purchase of the land, erection of the building and for equipment. A building committee composed of Dr. L. P. Bailey, Dr. L. W. Ball, Dr. Fletcher Wright, Jr., Dr. Guy Horsley and myself was appointed by President James Hagood. The committee began its work on October 31, 1956, and has functioned throughout the life of this undertaking.

Secretary Bob Howard carefully studied the needs of the executive staff and, in cooperation with the architectural firm of Marcellus Wright & Son, the building you now see was designed. Largely through the efforts of Drs. Linwood Ball and Benjamin Rawles, Jr., and with the painstaking help of our able attorney, Mr. Robert C. Duval, Jr., the property was acquired from the Richmond Foundation. We are fortunate to be located in this beautiful section of Richmond in a setting where tranquilizing drugs should never be needed.

The problem of melling our previously owned furniture with the new and effectively combining all into the motif of this structure was accomplished



Figure 2

through the efforts of Dr. Guy Horsley and members of the executive staff. The Building Committee has served primarily in an advisory capacity insofar as the actual construction of the building is concerned. Here the work has been done by our efficient office staff and by the careful and conservative planning and supervision of the architects.

As you know, there are many problems encountered in the realization of a building of this type. This begins with the reasons for a new headquarters in the first place, the needs for a workable shop, acquisition of desirable land at a reasonable figure, selection of an architect and building contractor, the purchase of office equipment and the selection of pleasing decorations. I am sure that these, and other problems, could not have been effectively solved with-

out a building committee who have worked harmoniously and diligently.

To interject a personal note, I will always have the feeling of what I hope is pardonable pride that this new edifice was conceived and the money appropriated during the time that I was honored to hold the office of president of the Society.



Figure 3

It has become almost trite to say that Secretary Bob Howard and his staff have done a good job. Actually, this building was inspired by Bob, a fact that he will probably deny. He and his co-workers have followed through with minute attention to every detail. The result is thus evident: we have a workable building achieved at a reasonable cost to the Society.



Figure 4

New ventures are often loaded with surprises. The most amazing one we can report is that your Building Committee, in these days of high and ever rising prices, returns the sum of approximately $4,000 in unused money. For this saving, we give thanks to our executive staff, the architects and contractors, who have conscientiously worked with us to make this dream a reality.

James P. King, *Chairman*
Society Headquarters Building
Committee

A Tour of the Building.

For those of our members who were unable to attend the Open House and Dedication of the new headquarters building, we felt you would like a tour and we have attempted to give you some idea of what it is like in pictures.



Figure 5

The first picture shows the vacant lot when it was purchased in 1957. The second one was taken in the winter after actual construction had begun but was at a standstill on account of snow and freezing weather. The next picture looked a little more promising as the window frames were in place.



Figure 6

In September of 1958, the building was finally

completed and figure 4 shows the front of the building. Figure 5 is the back yard where we hope to have plenty of flowers and shrubbery to further beautify our surroundings.

As we enter the building, on either side of the entrance door are two large walnut plant containers. These were given by the Council of 1957 as a living



Figure 7

memorial to Dr. Frank A. Farmer of Roanoke (Fig. 6).

Figure 7 shows the reception area and secretary's office where Miss Tobin holds forth. The other desk is for additional secretarial help that is needed from time to time. This area is painted in beige with matching draperies and tile floors. The furniture is made of walnut and cherry and the occasional



Figure 8

chairs are persimmon color. Behind the background wall is the machine room where office equipment, mailing supplies, etc., are kept, and on the right is a room for filing cabinets, supplies, etc. To the left of this area is a small room (Fig. 8) where committee meetings, etc., may be held. In this room, we were able to utilize some of our old furniture in red and yellow.

Down the corridor is Mr. Howard's office (Fig. 9). The walls are light green with matching carpet and the draperies are in beige with brown and cream figures. Here again, we used some of the old furniture, having it refinished so it looks like new. The occasional chairs are green and Mr. Howard's office chair is a bright red.



Figure 9

Mr. Smith occupies the room in figure 10. The colors in his office are the same as Mr. Howard's. His office chair is a deeper red and the occasional chairs are also red.

Figure 11 shows the office where the Virginia Medical Monthly work is done by Miss Watkins. The furniture here is the same as that in the reception area, walnut and cherry. The office chair is flame colored and the occasional chairs are off-white.



Figure 10

Now that we have finished with the offices, let's go back to the reception area and the other side of the building. This contains the furnace and equipment

room and the kitchen (Fig. 12) This is quite small but large enough to prepare lunches for small committee meetings as it has a stove and refrigerator and plenty of cabinet space. The walls are in bright yellow. The furnace room is through the door shown in the picture.



Figure 11



Figure 12

Further down the corridor is our pride and joy—the conference room. This room is in gray with tiles to match. The draperies are bright, with orange, yellow, green, etc. The conference table is 18 feet long and in two tones of wood. The chairs around the table are orange and the smaller chairs in the background are in yellow. This room will hold 50-60 people for a conference. Already several organizations are holding their monthly meetings here.

On the second floor of the building is the office of



Figure 13

the Virginia Academy of General Practice. There are two other offices on this floor which are not now being occupied.

There is a full sized attic which is partially floored and shelved and serves as a storage area for supplies not needed at all times.

All in all, it is a beautiful and most functional building and we hope all of our members will come to see it. It is your building and the door is always open to you!

Miscellaneous . . .

Our Ladies—God Bless 'em!

The American Association of Medical Assistants held their Second Annual Meeting at the Palmer House, Chicago, October 30-November 2, and from all accounts via "The Grape Vine", juice included, it was a complete success. One of the highlights was a tour of the A.M.A. home office, followed by a reception. You can always count on Leo Brown, Miss Carol Towner and their Association to go all out for The Ladies.

The Theme of that afternoon's program dealt with "An Eye to the Future". Highlighting the afternoon program were none less than Leo Brown, George Cooley, Oliver Field, Adaline Hayden, James Liston, James Reed, proud parent of AMA's newest baby, "The AMA News", Austin Smith and last but not least, Carol Towner and Jean Meyrick.

The morning of the first day included a meeting of the House of Delegates and a general business session.

That evening was climaxed by a Social Hour and President's Dinner with Dr. Morris Fishbein's presentation of "Am I My Doctor's Helper?"

Saturday morning sessions were divided into 3 groups covering such general subjects as business, medical and technical problems and then those in attendance could choose the section that most served their particular office.

Saturday afternoon's session dealt with such pertinent subjects as "Live, Learn and Dream" and "Is the Welcome Mat Out?"

The Grand Finale to a most successful meeting was another cocktail party followed by a banquet and installation of the new officers.

The 1959 meeting will be in Philadelphia. As immediate past chairman of our State PR Committee, I wish to urge all of us to support those Chapters of Medical Assistants already in existence and to assist in the formation of new chapters wherever possible. Our state organization is a growing active group as shown by the following figures. In 1957, the membership of the Virginia Association of Medical Assistants numbered 15 and 4 attended the national meeting. In 1958, their membership had increased to 35 and 8 attended. Frankly, I think their growth and percentage of attendance surpasses that of The Medical Society of Virginia. Come on Fellows, don't let "The Weaker Sex" out do us again.

John Wyatt Davis, Jr.

Nursing Brochure

A new brochure on nursing by the Virginia State Board of Nursing Examiners in cooperation with the Virginia League of Nursing, the Virginia Schools of Nursing, the Virginia Hospital Association and The Medical Society of Virginia has just been published and has been distributed to those interested in nursing improvement. The brochure is attractively designed and has photographs of nurses in their various fields of activity. For instance, it illustrates the work of a practical nurse, the pediatric nurse, public health nurse, obstetrical nurse, the orthopedic nurse and the surgical nurse. The principal space of the brochure is given to listing all of the schools of nursing in the State of Virginia. This is divided into schools of practical nursing, certified tuberculosis schools, three-year diploma schools of professional nursing, collegiate nursing programs and junior college nursing programs. After each school is listed its location, the director or supervisor of the program, whether or not married students are admitted, approximate size of the student body, the vacation allowance, the time of beginning classes, the initial cost of the student, the stipend paid the student, whether or not maintenance is furnished and whether or not scholarships are available. A description of the various courses in practical nursing and professional nursing are outlined in detail.

The brochure gives the educator, nursing director and physician a comprehensive view of the entire nursing program in the State of Virginia. It is hoped that this new brochure will serve as a stimulus to nurse recruitment. Copies of the brochure can be obtained by writing to the Virginia State Board of Nurse Examiners, Central National Bank Building, Richmond, Virginia.

J. P. Lynch

Woman's Auxiliary . . .

President	Mrs. Charles A. Easley, Danville
President-Elect	Mrs. Walter A. Porter, Hillsville
Vice-Presidents	Mrs. George K. Brooks, Richmond
	Mrs. James M. Moss, Alexandria
	Mrs. W. A. Eskridge, Parksley
Recording Secretary	Mrs. Robert B. Keeling, South Hill
Corresponding Secretary	Mrs. J. J. Neal, Danville
Treasurer	Mrs. Wyndham B. Blanton, Richmond
Publication Chairman	Mrs. Custis L. Coleman, Richmond
Directors	Mrs. J. R. St. George, Portsmouth
	Mrs. Lee S. Liggan, Irvington
	Mrs. Maynard Emlaw, Richmond



Mrs. Charles Allen Easley, Jr.
President, Woman's Auxiliary

Biographical Sketch

Elizabeth Fitzgerald Easley, the wife of Dr. Charles Allen Easley, Jr., a surgeon, is from Danville. She was born in Pittsylvania County. Her father is James William Fitzgerald and her mother was Elizabeth Gregory, both of Pittsylvania County. She is one of four children. Elizabeth attended elementary schools in the County, then Averett College for two years, where she was vice-president of the Student Government. She then entered the Medical College of Virginia School of Nursing, in Richmond, graduating there in 1936.

Dr. Easley was born in Bluefield, West Virginia, where he attended elementary schools. He took his high school work at Hargrave Military Academy, Chatham, Virginia, and received B.S. degree from William and Mary College. Following the footsteps of three generations, he received his medical degree from the Medical College of Virginia in 1932. Dr. Easley chose surgery as his field of medicine and Elizabeth is a charter member of the Auxiliary to the International College of Surgeons.

In 1937, during his surgical training, Dr. Charles Easley and Elizabeth Fitzgerald were married. They came to Danville in 1940 and have lived here since, except for three years during World War II, when Dr. Easley was in the Army. He landed with the first troops in Africa and went through Italy, France and Germany with the Second Auxiliary Surgical Group.

Charles and Elizabeth have three lovely, active and popular children. Sarah age 20 attended Westhampton College for two years, then following her mother, last fall entered the Medical College of Virginia School of Nursing. Margaret age 15 attends High school in Danville and Charles III age 12 is in the Junior High School. The Easley family is very active in the First Baptist Church, where Elizabeth served as President of the Woman's Missionary Society for two years.

Her medical auxiliary work started in the Woman's Auxiliary to the Danville-Pittsylvania Academy of Medicine. She is a past president and has served on the board for a number of years, both as an officer and as chairman of most committees.

On the board of the Woman's Auxiliary to The Medical Society of Virginia, Mrs. Easley was Membership Chairman 1949-50, Chairman Cancer Control 1956-57, 3rd Vice-president 1954-55, 1st Vice-president 1955-56 and President-Elect 1957-58.

Mrs. Easley has many other associations and activities. Member of the Wednesday Club of Danville, where she served four years on the Board of Governors and was Treasurer for two years. She is an active member of the Forest Hills Garden Club and Benevolent Society.

The Easleys' big white house on West Main Street is a haven and meeting place for many, with

kinfolk and friends from both sides of their family living in the County. Its doors are open for weddings, convalescence, illnesses, committee meetings, social teas and young people's activities of all ages.

Elizabeth is a good example of the saying: "If you want a job done, ask a busy woman". She will do it everytime if she can.

Richmond.

The November meeting of the Woman's Auxiliary to the Richmond Academy of Medicine was the Public Relations Luncheon. This was one of our most important meetings of the year, with presidents of various women's organizations throughout the city as guests. The Public Relations luncheon is held each year to acquaint these organizations with the Auxiliary's program of service. This year there were 48 guest presidents at the luncheon.

Dr. Richard Ackart, Executive Director of the Virginia Hospital Service Association, was guest speaker. Advocating health insurance as one of the best measures to prevent socialized medicine, Dr. Ackart discussed insurance plans for the group.

The Auxiliary is pardonably proud of the wonderful success of the house tour in October. As a result of the work on the tour by Auxiliary members, we are presenting $2,500 to Sheltering Arms Hospital.

Mrs. J. Henry Hawkins
Publicity Chairman

Northampton-Accomac.

The Auxiliary to the Northampton-Accomac Medical Society held its fall meeting at the home of Mrs. H. L. Denoon, Jr., on November 11th. There were 17 members and one guest present. Mrs. Raymond Brown, president, presided.

Mrs. Walter Eskridge, vice-president of the State Auxiliary, reported 100 per cent attendance of our delegates at the State meeting.

Mrs. Denoon announced the sale of napkins, showing a map drawing of the Eastern Shore of Virginia, the proceeds to be used for a scholarship in practical nursing for a girl from Tangier.

A new scrap book has been started by Mrs. J. Walter Jackson, the first one dating back to the beginning of the Auxiliary having been filled.

Mrs. Rooker White's Cook Book was shown and to date over four hundred copies had been sold.

The following officers for 1959-1960 were elected: President, Mrs. Raymond K. Brown; vice-president and president-elect for 1960-61, Mrs. W. Carey Henderson; secretary, Mrs. R. W. Wingfield; and treasurer, Mrs. Wayne Mears.

The January meeting will be with Mrs. J. Fred Edmonds, the second Tuesday in January.

Catherine Rush Trower,
(Mrs. E. Holland)
Publicity Chairman

Alexandria.

This Auxiliary held its monthly meeting at the home of Mrs. M. Hayne Kendrick on November 18th. Mrs. Walter Brennan served as co-hostess. The program was presented by various members who gave a brief history of the organization and development of the Woman's Auxiliary and its correlation to the A.M.A.

Members and their husbands enjoyed the annual covered dish supper which was held November 1st at the home of Dr. and Mrs. F. Preston Titus. Several months ago, the Auxiliary sponsored a Bridge Marathon for the benefit of the Alexandria Hospital Building Fund. Winners of each group were announced and presented with silver bowls. They were Dr. and Mrs. A. J. Delaney, Dr. and Mrs. L. E. Mangus, Mrs. Colin MacRae and Mrs. H. C. Bush, and Mr. and Mrs. R. Taylor Cosby.

Mrs. L. Mangus
Publicity Chairman

Editorial....

The 86th Congress—Friend or Foe of Medicine?

ONE ASPECT of the November election which has not been generally discussed is the effect the new Congress will have on medical legislation. The heavy Democratic gains in the North and West unquestionably will cause a national swing further to the left with new legislation aimed at some degree of socialization of medicine. The question is not one of direction but rather how far Congress will go.

The strong support given to many of the successful candidates by organized labor will insure the introduction of the type of medical legislation which has proved popular in the past with this great pressure group. Before the present Congress is through with us we may look back with nostalgia to those halcyon days of the late nineteen-fifties when the United Mine Workers appeared to pose the greatest threat to American medicine.

In the final analysis much will depend on the committee appointments and especially on those House members assigned to the Ways and Means Committee and the senators who will make up the Finance Committee. These two committees play a major role in shaping legislation. Fortunately both chairmen are Southerners. Congressman Wilbur Mills of Arkansas and Senator Harry Byrd are the senior Democrats of their respective committeees. Just how much control they will be able to exert over their victory flushed fellow members remains to be seen but it is of more than passing interest that they are from the States of Arkansas and Virginia. It is ironical that the two States that now serve as whipping boys for the "liberals" of the North and West also provide the chairmen of the two most powerful committees in Congress.

There will be four physicians in the 86th Congress, one less than last year. Dr. Thomas Alford, a board member in ophthalmology from Little Rock, Arkansas was elected, whereas Drs. Will Neal of West Virginia and A. L. Miller of Nebraska were defeated. An interesting aftermath to the election is the moving up of Dr. Thomas Morgan of Pennsylvania to the chairmanship of the House Foreign Affairs Committee. Dr. Morgan will become the first physician to head this strong group in the 136 years of its existence.

Regardless as to whether we approve of the actions of the 86th Congress we will find much in it of interest and certainly it will bear watching from a medical standpoint.

H. J. WARTHEN, M.D.

News Notes . . . .

New Members.

Since the list published in the December issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

William Daniel Benham, M.D., Arlington
William Francis Bernart, M.D., Nassawadox
John Edward Bryant, Jr., M.D., Franklin
Ira Marshall Cantin, M.D., Norfolk
Burr Noland Carter, II, M.D., Richmond
Guido R. Escalante, M.D., Norfolk
Sarah Elizabeth Forbes, M.D., Newport News
Halcott T. Haden, M.D., Kecoughtan
Ralph William Hess, M.D., Grundy
Juergen Hubert, M.D., Richmond
Alice Heyl Kiessling, M.D., Falls Church
Albert John Miele, M.D., Norfolk
John Howell Peacock, M.D., Arlington
James Given Snead, M.D., Roanoke
Thomas Peirson Stratford, M.D., Richmond
William P. Wagner, M.D., Suffolk

Dr. Ball Again Honored.

Dr. W. Linwood Ball, Richmond, has been appointed to the Board of Trustees of the American Medical Association, filling the vacancy caused by the death of Dr. Warren Furey, Chicago. His term of office is through the June 1959 meeting.

Dr. Ball is currently vice-president of the American Medical Association.

Virginia Board of Medical Examiners.

At the meeting of the Board held on June 14th, the following received their license to practice (by examination):

Mary Lou Combs Abram, Charlottesville
Charles Hubert Adams, Greensboro, N. C.
Douglas Eugene Andrews, Richmond
Recep Ari, Washington, D. C.
Poñrio Arias, Colony
Carlos Ray Ayers, Charlottesville
James Porter Baker, Boston, Mass.
James McDermott Barnes, Richmond
Eva L. Satchwell Batman, Richmond
Henry Maynard Bellamy, Tacoma, Washington
Jack Kitchener Bentley, Madison Heights
Larry William Berman, Portsmouth
Baldo V. Bertocchi, Brooklyn, N. Y.
Robert Oscar Biern, Charlottesville
Harry Bjornstad, Newton, Conn.
Wilmer Kenneth Blaylock, Durham, N. C.
Donald B. Bletz, Boston, Mass.
Donald Curtis Blose, Richmond
Joseph Thomas Bones, Richmond
Wayne Douglas Boring, Jr., Iowa City, Iowa
Jack Ephraim Botton, Richmond
Robert Alfonso Capestany, Baltimore, Md.
Clifford William Caplen, Alexandria
Carl Bruce Caplinger, Boonton, N. J.
Jane Triplett Carswell, Richmond
Melvin Davis Childers, Jr., Roanoke
Richard Franklin Clark, Hampton
John William Cline, Winston-Salem, N. C.
John Cole, Jr., Charlottesville
Stan Lee Coleman, Baltimore, Md.
Robert Ellwood Collins, Washington, D. C.
Manuel Enriquez Comia, Richmond
Enda Anthony Coogan, Suffolk
Alfred Bartlett Cramer, III, Richmond
Christian A. J. Creteur, Hartford, Conn.
John Armstrong Cross, Jr., Chapel Hill, N. C.
Donald Snead Daniel, Jr., Baltimore, Md.
James Ryland Darden, Jr., Richmond
Jose Arturo de Lamerens, Philadelphia, Pa.
Luigi Maria De Lucia, New York, N. Y.
John William Dickerson, Iowa City, Iowa
John Herbert Dilworth, Richmond
Robert Howe Dodd, Galveston, Texas
Thomas Edward Donnelly, Roanoke
Karl-Albert Dresen, Allentown, Pa.
Frank Humbert Dudley, Roanoke
Robert Eugene Dye, Keystone, W. Va.
Porter Burks Echols, Jr., Lynchburg
Gardner Tyler Edwards, Jr., Franklin
Arnold Marvin Epstein, Newport News
Frederick Carlyle Evans, Jr., Richmond
James Lee Ferrell, Watertown, Mass.
Thomas Larkin Fieldson, Miami, Fla.
Rolf Hendrik Fisscher, Staunton
Albert Andrew Fratrick, Roanoke
Bernard William Freund, Jr., Winston-Salem, N. C.
Joachim Hans Fritsch, Columbus, Ohio
Kaspar Fuchs, Charlottesville
Richard Ludwig Funk, Petersburg
Edward Elias Gahres, Arlington
James Vincent Gallagher, Springfield
Joseph Michael Gardner, Roanoke
Roland Gravatt Garrett, Jr., Richmond
Harry Gazelle, Cleveland, Ohio
Ottavio Gelmi, Washington, D. C.
Joachim Dieter Geratz, Chapel Hill, N. C.
Gerald Alan Gildersleeve, Boston, Mass.
Kenneth Arnold Gill, Jr., Portsmouth
Thomas Robert Glasco, Charlottesville
Rafael Manuel Gonzalez, Long Island City, N. Y.
Ambler Ray Goodwin, Detroit, Mich.
Arthur Gaillard Gower, III, Vienna

Patrick Grosvenor Graham, St. Louis, Mo.
Patrick Bruce McNeil Gray, Philadelphia, Pa.
William Easley Hale, Aldan, Pa.
Robert Batson Hall, Charlottesville
William Joseph Hancock, Charlottesville
George Russell Hanna, Charlottesville
Andrew Wilmer Haraway, Jr., Galveston, Texas
James William Harding, Washington, D. C.
Ferdinand Baldwin Harrington, Jr., Atlanta, Ga.
Edwin James Harvie, Jr., Kansas City, Mo.
James Chas. Frederick Healey, Harding, Mass.
Stephen Alexander Hegedus, Perry Point, Md.
Walter Jackson Helm, Rochester, Minn.
Edmond Reginald Henelt, Denver, Colo.
Grahame Frederick Henson, Charlottesville
Edwin Beaumond Hodge, Jr., Winston-Salem, N. C.
Harry Franklin Hoke, Jr., Winston-Salem, N. C.
Hannibal Eldredge Howell, Holland
Claude Kavilla Hylton, Winchester
James Moir Hylton, Hillsville
Charles Leon Jennings, Jr., Norfolk
Charles Douglas Johnson, Ewing
Demetrius G. Kallinteris, Chicago, Ill.
Friedrich K. Kammerling, Glen Allen
Alvin Monnie Kanter, Hampton
Farid Karam, Tampa, Fla.
Herbert Myron Kauffman, Jr., Cleveland, Ohio
Anthony Kavas, Brooklyn, N. Y.
Donald John Kenneweg, Charlottesville
Mansho Tolaram Khilnani, New York City
Kuang Shim Kim, Dorchester, Mass.
James Peter King, Jr., Kansas City, Kan.
Ronald Bruce Kledzik, Charlottesville
Ursula Natalia Klein, Hanover
Byron Phillip Kocen, Richmond
Emmanuel Konstantinidis, New York City
Thaddeus Lewis Kostrubala, Charlottesville
Andrew Lee Lawrence, Jr., Macon, Ga.
James Wellford Lecky, Seattle, Wash.
Harvey Daniel Lewis, Jr., Kansas City, Mo.
David Lee Litchfield, Richmond
Austin S. Litvak, Charlottesville
Alhert Harrison Luck, Danville
Mary G. Del Torto Ludwig, Kansas City, Kan.
Paul Edward Ludwig, Kansas City, Kan.
Silvia Luik, Williamsburg
Clabe Webster Lynn, Jr., Petersburg
Robt. Archibald A. Mackintosh, Petershurg
Norman Dallas MacRorie, Petersburg
Richard Dunn Marks, Jr., Denver, Colo.
Barringer Duncan Marshall, Jr., Chapel Hill, N. C.
Rashid A. Massumi, New Haven, Conn.
John Addison Mathews, Roanoke
James McKay, Morganton, N. C.
Viktorija Mickans, New York City
John Milton Miller, Jr., Va. Beach
Harry Lynn Moore, Jr., Springfield, Ohio
Orhan Muren, Richmond
Marion Julian Murray, Jr., Richmond
Hideo Oshiro, Chicago, Ill.
David Edward Page, Albuquerque, New Mex.
Antonio Palmieri, Arlington
Christos Andreas Papalekas, Evergreen Park, Ill.
John Joy Payette, Jr., Winchester
William Fennell Peach, Jr., Richmond
William Bryan Pollard, Jr., Charlottesville
Irvin Leonard Posner, Baltimore, Md.
Franz Pschibul, Jersey City, N. J.
Jesse Davis Robertson, Richmond
Frederick Daniel Robinson, Charlottesville
Norman M. Rosenbaum, Norfolk
Manuel Ross, Clifton Forge
Jorge Ruiz-Rangel, Brooklyn, N. Y.
Yutaka Sakurai, New York City
Kemper Davis Sarratt, Jr., Richmond
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Robert Bradley Scott, New York City
George Pete Scouras, Charlottesville
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Don Franklin Shreve, Asheville, N. C.
Owen Clay Shull, Richmond
Gladstone Edward Smith, Jr., Roanoke
Edwin Marvin Sokol, New York City
William D. Stallings, Kansas City, Kan.
David Deaderick Stone, Bristol, Tenn.
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Richard Dean Tester, Roanoke
Kenneth Douglas Tuck, Parma, Ohio
Rudolf Jakob Utzschneider, Worcester, Mass.
Harmen Van Der Woude, Norfolk
Rufus Oscar Van Dyke, Jr., Richmond
Jose M. Vilallonga, Falls Church
Fred Arps Vinson, Jr., Norfolk
Karl Kenneth Wallace, Jr., Sandston
Peter Roderick Walsh, Ottawa, Ont., Canada
Joseph Paul Wampler, Richmond
Chun-heng Herbert Wang, Philadelphia, Pa.
Rose Kuan Wang, Youngstown, Ohio
Harry Hudnall Ware, III, Richmond
Charles Oscar Watlington, San Francisco, Calif.
Stuart Harold Wax, Rochester, N. Y.
Jock Rodgers Wheeler, Richmond
David Wesley White, Norfolk
James Franklin White, Jr., Baltimore, Md.
Isaac Sommers White, Bloxom
Wm. Westwood Whitehurst, Richmond
Vivian Myrtle Wilkerson, Highland Springs
Edward Croft Wilson, Richmond
Thomas Epps Wilson, III, Charlottesville
Robt. Woodside Woodhouse, III, Va. Beach
Benjamin H. Word, Jr., Charlottesville
Willis Forrest Wunder, Lackland A.F. Base, Fla.
Wm. Pharo Wiltsee Young, Roanoke
Alvin Martin Zfass, New York City

The following were licensed by endorsement of credentials:

Edward Lee Alexander, Jr., Newport News
Joseph Boyd Anderson, Pittsburgh, Pa.

Dewey James Bailey, Jr., Charlottesville
Martin Fred Bain, Arlington
William George Ballinger, Tarrytown, N. Y.
Lucian Bauman, Arlington
Leonard Stanley Berman, Falls Church
William Francis Bernart, Nassawadox
Albert Joseph Bisese, Falls Church
John Woodie Boone, Jr., Roanoke Rapids, N. C.
Anna Jane Albertson Bucur, Arlington
Samuel Burtoff, Washington, D. C.
Baxter Hayes Byerly, Danville
Robert Evans Campbell, Bristol
Burr Noland Carter, II, Richmond
Robert Thomas Cutting, Fairfax
Donald Fales Davis, Williamsburg
Walter David DeVault, Jr., Charlottesville
Charles Marion Earley, Jr., W. Palm Beach, Fla.
Richard Harrison Egdahl, Richmond
George Jenkins Fleury, Jr., McLean
Mortimer James Folston, Leesburg
Bewley Douglas Frierson, Williamsburg
Edwin Hayes Bakala, Richmond
Thomas Griffin Hardy, Jr., Roanoke
Ellis Umberger Harr, Bristol, Tenn.
James Phillip Hartley, Washington, D. C.
Warren Vincent Huber, Colony
Francis Joseph Januszeski, Richmond
William Stone Jordan, Jr., Charlottesville
Elvis Jeff Justis, Jr., Wise
William Dean Keck, Radford
Milton Homer Kibbe, Colony
Harry Jay Kicherer, Silver Spring, Md.
Dorothy Anna Leake, Winchester
Leon R. Levitsky, Alexandria
James Beaton Littlefield, Charlottesville
John Francis Lynch, Falls Church
Franklin Bowman McKechnie, Richmond
John Peter Mandanis, Arlington
Alvin Margolius, Jr., Norfolk
William Watkins Martin, Jr., Richmond
John Patrick McDade, Franconia
Albert John Miele, Norfolk
John Dollar Paul, Jr., Honey Brook, Pa.
Edwin Lee Pierce, Richmond
Julius Samuel Piver, Alexandria
Douglas Fuller Powers, Bristol
Robert Lou Regan, Fairfax
Margaret A. Ribble, Williamsburg
Charles Lembo Rickerich, Arlington
Melvin Wesley Sandmeyar, Jr., Silver Spring, Md.
Marvin Qua Sanner, Alexandria
Joseph Bart Sheffery, Washington, D. C.
Walton Eugene Stevens, Charlottesville
Ian Pretyman Stevenson, Charlottesville
Octavia Reynolds Stevenson, Crozet
Robert Ellsworth Stout, Hampton
Richard Thomson Van Orden, Arlington
Charles M. Weber, Rockville, Md.
James Phillip Westmoreland, Norfolk
Lindley Murray Winston, Jr., Altavista
Doris Jane Woodward, Leesburg

In the list of physicians licensed by the Board at the December 1957 meeting, the name of Dr. Julius L. Schwartz, Brooklyn, New York, was omitted due to a clerical error.

Dr. Austin Smith Resigns.

Dr. Austin Smith, editor of the Journal of the American Medical Association, has resigned effective December 15th. He has served as editor since 1949. Dr. J. F. Hammond, associate editor, will take over the duties of editor.

Southern Medical Association.

At the annual meeting of the Association, held in New Orleans, November 3-6, Dr. Milford O. Rouse, Dallas, was installed as president. He succeeded Dr. W. Kelly West, Oklahoma City. Dr. Edwin Hugh Lawson, New Orleans, was named president-elect.

There was an attendance exceeding 6000 persons, with 3581 physicians. This was the largest meeting in the history of the Association.

Dr. Donald S. Daniel, Richmond, is Councilor of the Association. Other Virginia doctors serving as section officers are: Dr. Malcolm H. Harris, vice-chairman of the Section on General Practice; Dr. William D. Suggs, Richmond, secretary of the Section on Gynecology; Dr. G. S. Fitz-Hugh, Charlottesville, chairman of the Section on Ophthalmology and Otolaryngology; Dr. McLemore Birdsong, Charlottesville, chairman of the Section on Pediatrics; Dr. Herbert W. Park, Richmond, chairman of the Section on Physical Medicine and Rehabilitation; and Dr. Guy W. Horsley, Richmond, vice-chairman of the Section on Surgery.

Mrs. Kalford W. Howard, Portsmouth, was elected first vice-president of the Woman's Auxiliary.

Dr. Bohannon Honored.

Dr. Alvah P. Bohannon, Virgilina, is being honored by his fellow townsmen in January. He will be guest of honor at a dinner by the Ruritan Club. Dr. Bohannon has spent fifty-two years in practice in this area and still works 12 to 14 hours a day at his practice and running the town's only drug store.

Dr. Sutherland "Surprised".

Dr. Tivis Colley Sutherland, Haysi, Virginia's General Practitioner of the Year, was invited to the Haysi High School gymnasium on November 24th to hear the school band present its first public concert. He was surprised with a "This is Your Life" program, followed by a testimonial dinner. More

than 800 people turned out to pay homage to "Doc Tiv" who has practiced among them since 1908.

Portrait Presented.

The portrait of Dr. Cullen Pitt was presented to the University of Richmond at Homecoming on November 1st. The presentation was made on behalf of the alumni and alumnae and other friends by Representative J. Vaughan Gary. Dr. Pitt recently retired as University physician after 44 years of service.

Dr. Herbert W. Park, III,

Professor of physician medicine and rehabilitation of the Medical College of Virginia, served as moderator of a panel on neck injuries at the Mid-Atlantic regional meeting of the International College of Surgeons held at Hot Springs in November.

Other Virginia speakers at the meeting were Dr. Charles J. Frankel, Charlottesville, and Dr. Francis H. McGovern, Danville.

Dr. Robert E. McAlpine

Has been elected president of the Norfolk Unit, American Cancer Society. Dr. William C. Andrews has been named treasurer.

Dr. William T. Sanger,

Richmond, has been re-elected to the executive committee of the National Society for Crippled Children and Adults. He will continue as president emeritus of the Society and as chairman of the Easter Seal Research Foundation board of trustees.

Dr. Richard P. Bell, Jr.,

Has been elected President of the Staunton Kiwanis Club.

Dr. Philip Jacobson,

Petersburg, was guest speaker at the annual meeting of the Michigan Academy of General Practice in Detroit. His topic was The Theory and Therapy of Spontaneous Hemorrhage.

Seaboard Medical Association.

Dr. Charles E. Horton, Norfolk, was elected president of this Association at its annual meeting held in Elizabeth City, N. C., the first of December. He succeeds Dr. L. E. Sawyer of Elizabeth City. Vice presidents elected are Drs. John McCain, Wilson, N. C., T. A. Martin, Franklin, E. H. North, Elizabeth City, and Robert L. Payne, Jr., Norfolk. Dr. Clark Rodman, Washington, N. C., was re-elected secretary-treasurer.

Lynchburg General Hospital Staff.

Dr. C. S. King has been elected chief of staff of the Lynchburg General Hospital. Dr. Joseph Platt is chief of surgical services; Dr. Charles Whitmore, chief of medical services; Dr. F. N. Buck, Jr., vice chief of staff; and Dr. Powell Dillard, Jr., secretary.

For Sale.

B3002A G. E. Vertical Fluoroscope, with 10 MA unit and XPT tube, type B-2 screen, 8 years old, original owner, regular G. E. maintenance. Sold new $1,500.00. Price $650.00 F.O.B. Roanoke, Virginia. Write #425, care the Virginia Medical Monthly, 4205 Dover Road, Richmond, 21. (*Adv.*)

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Set of autopsy instruments. Calvarium clamp never used, electric saw, assorted knives, scissors, forceps, clamps, etc., large needles and other assorted articles. All in perfect condition, some new. Price $50.00. Write #575, care the Monthly, 4205 Dover Road, Richmond 21. (*Adv.*)

Obituaries . . . .

Dr. Robert Milton Taliaferro,

Prominent Lynchburg physician, died November 26th after a long illness. He was born in Amherst County in 1874 and graduated from the Medical College of Virginia in 1897. Dr. Taliaferro had practiced in Lynchburg since 1901. He "was known for his charities and beneficences exercised especially through his professional services." He was an examiner for several insurance companies and retired from active practice in 1953. Dr. Taliaferro was a Mason and a member of the Lynchburg Rotary Club. He was a Life Member of The Medical Society of Virginia, having joined in 1898.

Dr. Taliaferro is survived by a daughter, a sister, and three grandchildren.

Dr. Benjamin Watkins Rawles, Sr.,

Well-known physician of Richmond, died November 26th after an illness of several weeks. He was a native of Nansemond County and a graduate of the Medical College of Virginia in 1897. Dr. Rawles had practiced in Richmond since his graduation and was in active practice until his final illness. He was for many years professor of principles of surgery at the former University College of Medicine and later at the Medical College of Virginia. Dr. Rawles was a Mason, a member of the Sons of American Revolution and of the Scottish Rite. He was a Life Member of the Medical Society of Virginia, having joined in 1899.

Dr. Rawles is survived by his wife, four sons and a daughter. One son is Dr. Benjamin W. Rawles, Jr.

Dr. Lewis Clay Haley,

Prominent Henry County physician, died at his home in Axton on November 17th after a long illness. He was eighty-nine years of age and graduated from the Medical College of Virginia in 1910. Dr. Haley had practiced in Henry County since his graduation and until his retirement because of ill health ten years ago. He was a member of The Medical Society of Virginia.

Mrs. Haley survived Dr. Haley by a week. They are survived by a son and three daughters.

Dr. Linwood Farley,

Director of public health for the counties of Charles City, James City, New Kent and York, and the City of Williamsburg, died November 18th after an illness of several months. He was fifty-eight years of age and a graduate of the Medical College of Virginia in 1928. Dr. Farley came to Williamsburg in 1947 from Augusta County. At the time of his death, he was president of the James City-Williamsburg Medical Society. He had been a member of The Medical Society of Virginia for twenty-eight years.

Dr. Farley is survived by his wife and a son.

Dr. George Lee Fosque,

Prominent Eastern Shore physician, died at his home in Onancock, November 29th. He has been in failing health for some weeks. Dr. Fosque was eighty-one years of age and a graduate of Jefferson Medical College in 1901. He had practiced in Onancock since his graduation. Dr. Fosque was an honorary member of Jewel Chapter Royal Arch Masons, one of the two receiving this honor during the past fifty-two years. He was a Life Member of The Medical Society of Virginia.

His wife, a son and two grandsons survive him.

Dr. Hillman.

On June 23, 1958, death terminated the active career of Dr. R. L. Hillman. Our Society lost a highly esteemed and respected member. Washington County lost a valuable citizen and a greatly loved and able physician.

To us, his colleagues, who knew him intimately and were associated with him in the practice of his art, rigid formal resolutions would fail to express our sense of loss—to us personally, to our profession, and to our community.

The active career of R. L. Hillman has ceased, yet his ability in the field of general medicine, his high ideals of practice, his unselfish service to his fellow man which continued in spite of grave illness, the prognosis of which he knew clearly, should serve as a stimulus to those who follow in his footsteps and add still more worth to his active career.

While these words are as inadequate tribute to the life of service lived by Dr. R. L. Hillman, nevertheless we desire a copy recorded in the minutes of the Washington County Medical Society and a copy mailed to the family of our deceased colleague.

HARRY M. HAYTER, M.D.
P. S. SMITH, M.D.
Resolution Committee

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Rear Admiral Bruce E. Bradley
Washington, D.C.
F. Willson Daily, M.D.----------Roanoke, Va.
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Jeff Davis, M.D.----------New York, N.Y.
Francis P. Furgiuele, M.D.-----Philadelphia, Pa.
Irwin A. Ginsberg, M.D.------Buffalo, New York
Bayard T. Horton, M.D.--------Rochester, Minn.
Wendell L. Hughes, M.D.-------Hempstead, N.Y.
John H. King, M.D.----------Washington, D.C.
T. Keith Lyle, M.D.----------London, England
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Robin M. Rankow, M.D.---------New York, N.Y.
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A. D. Ruedemann, M.D.----------Detroit, Mich.
Russell A. Sage, M.D.----------Indianapolis, Ind.
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Heth Owen, Jr., M.D.

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A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.
Armistead M. Williams, M.D.

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Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

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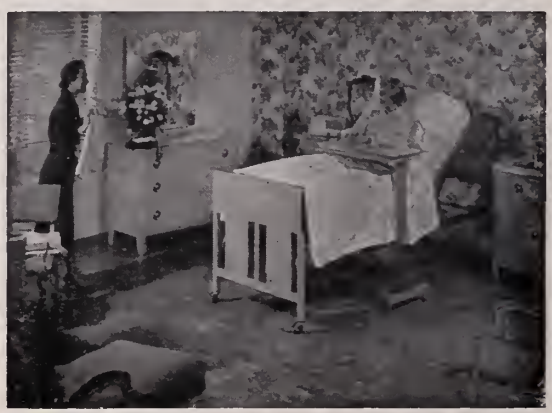
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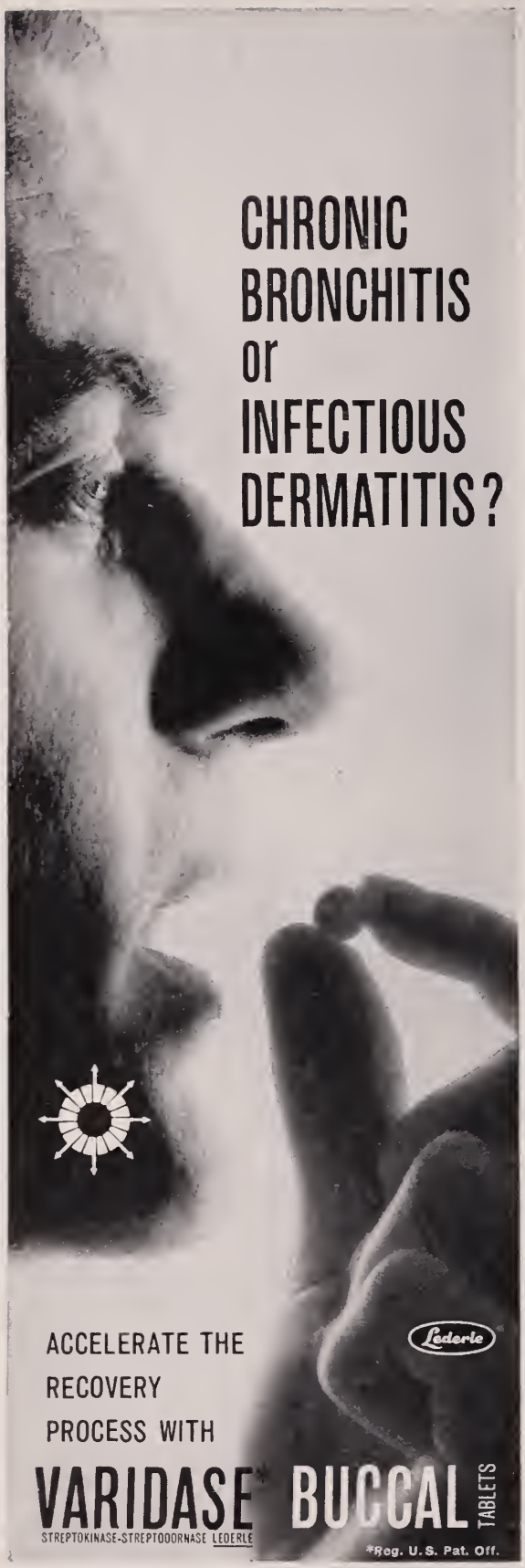
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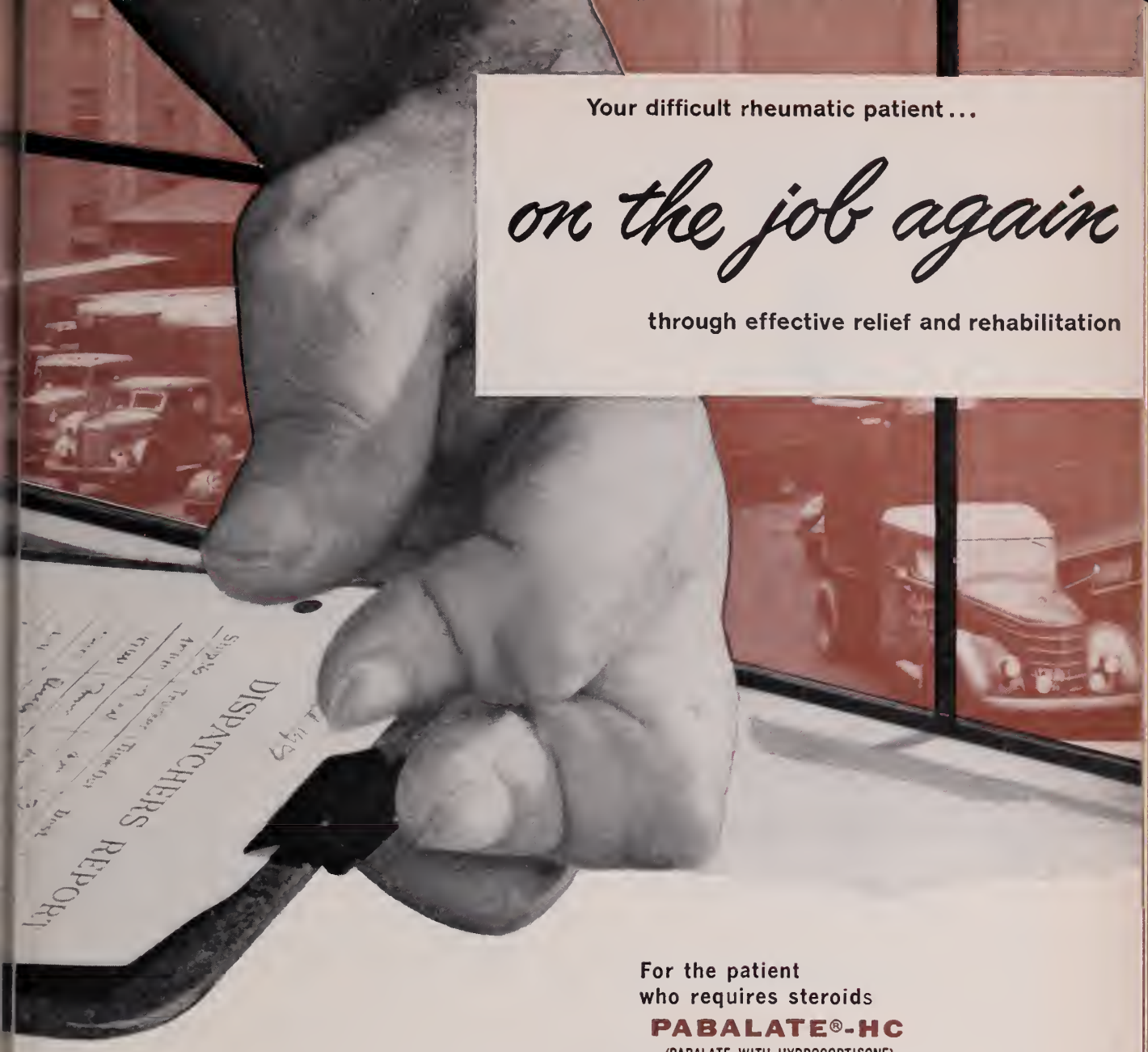
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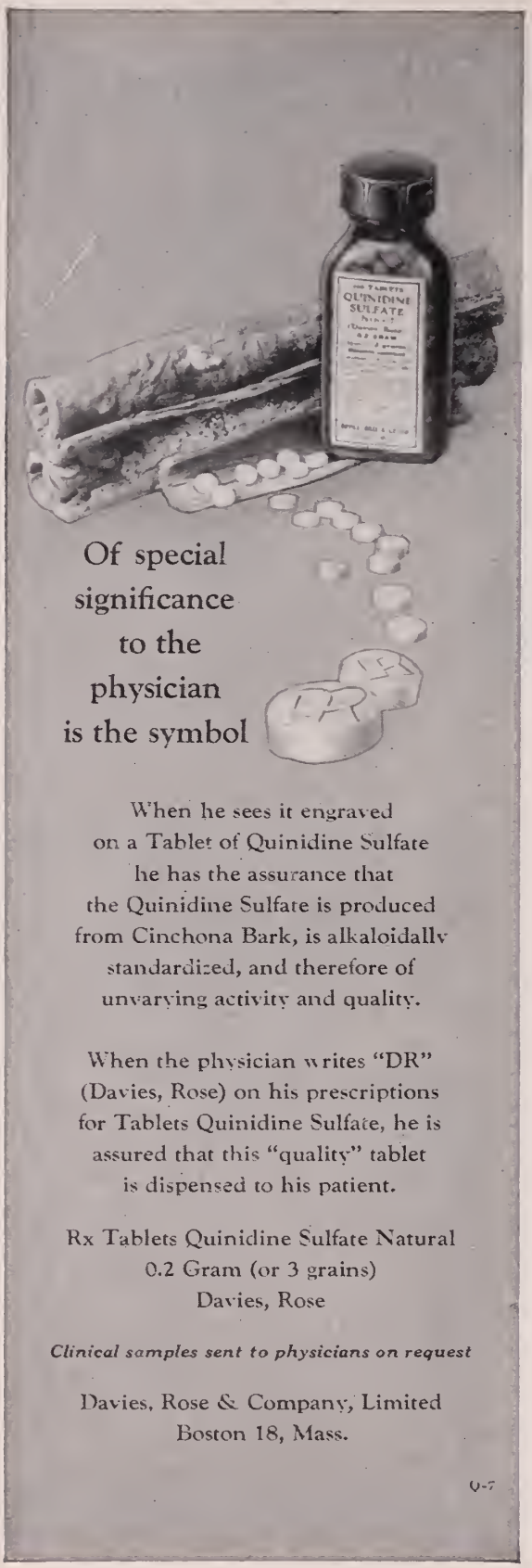
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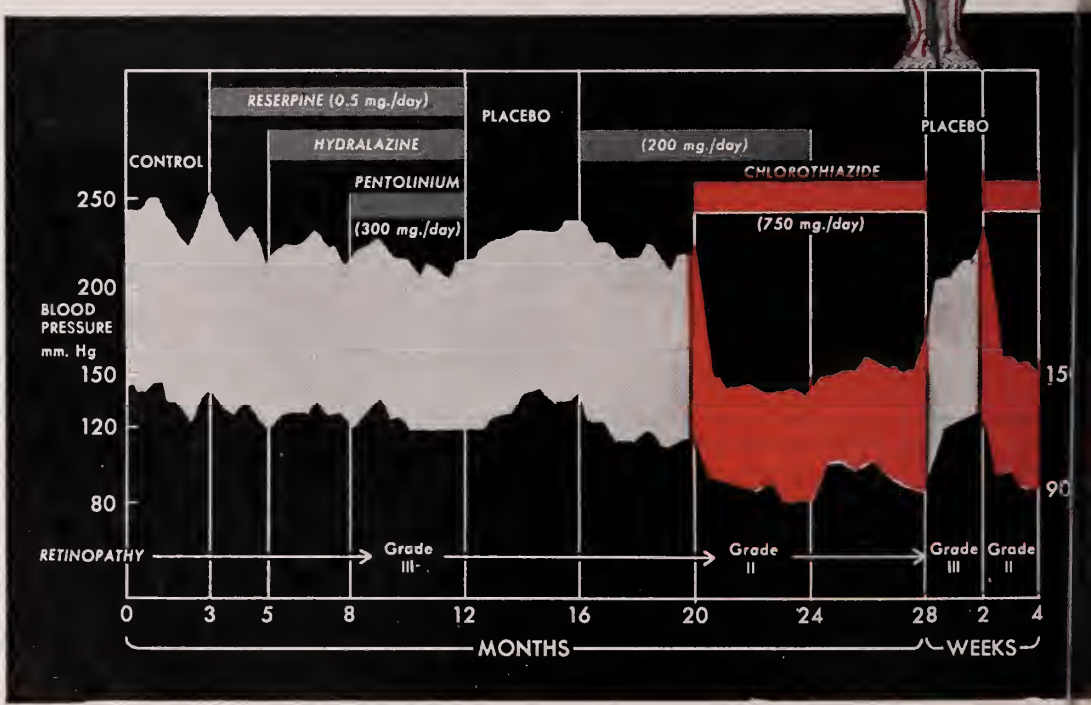
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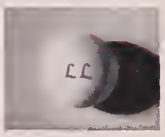
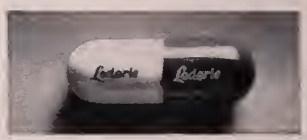
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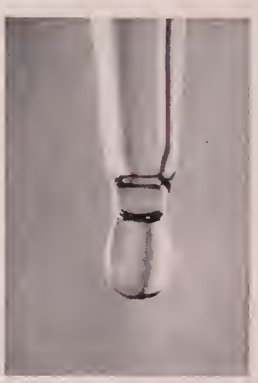
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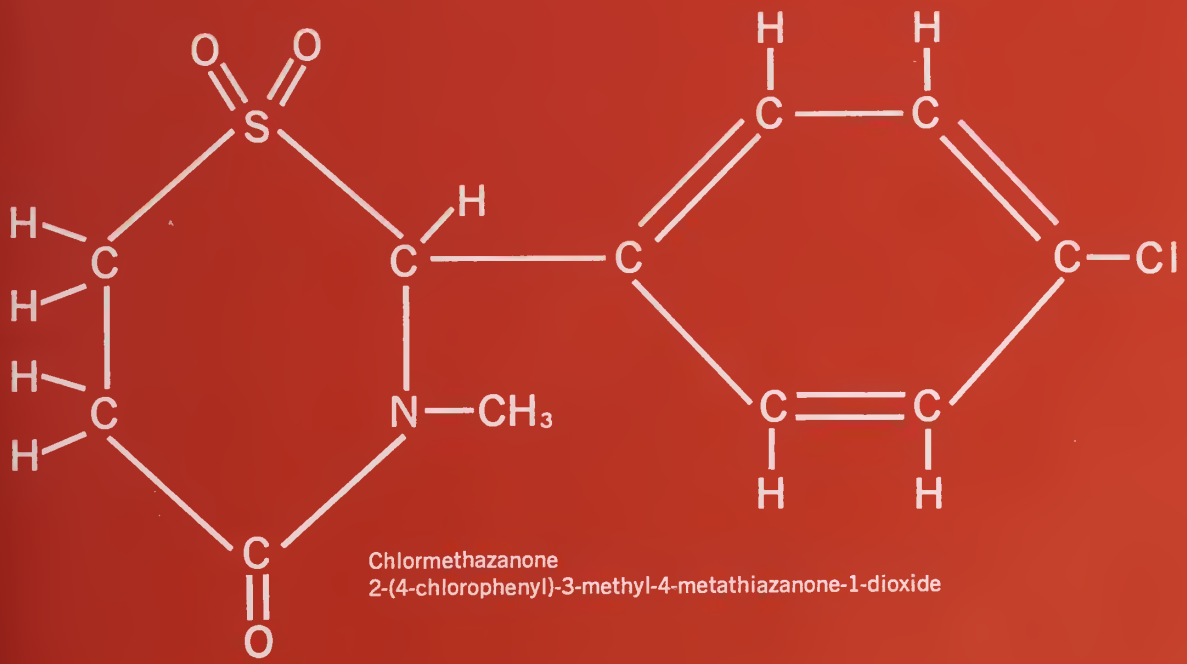
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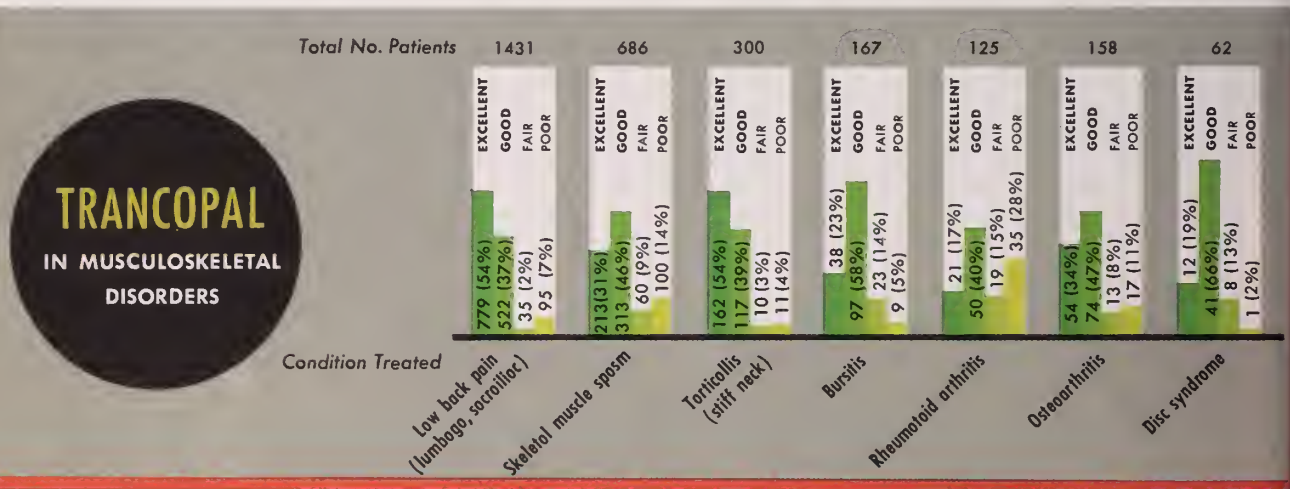
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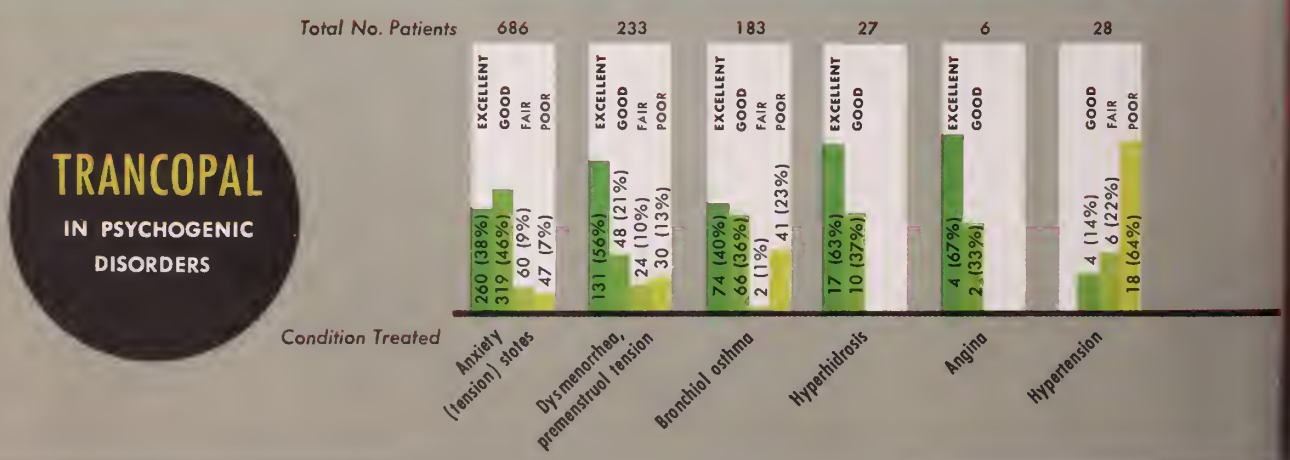
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n anxiety and tension states, 93 per cent effective.

ower incidence of side effects than with zoxazolamine, nethocarbamol or meprobamate.

lo known contraindications. Blood pressure, pulse ate, respiration and digestive processes unaffected y therapeutic dosage. No effects on hematopoietic ystem or liver and kidney function.

ow toxicity. In animals, even less toxic than aspirin.

lo gastric irritation. Can be taken before meals.

lo clouding of consciousness, no euphoria or epression.

lo perceptible soporific effect, even in high dosage.

CLINICAL RESULTS IN 4092 PATIENTS**



MUSCULOSKELETAL CONDITIONS
2929 Patients

+



PSYCHOGENIC CONDITIONS
1163 Patients

=



TOTAL 4092 Patients

MAJOR IMPROVEMENT
84%

**Cooperative Study, Department of Medical Research, Winthrop Laboratories.

Compare Trancopal with 3 widely used central relaxants

FOR ACTIVITY



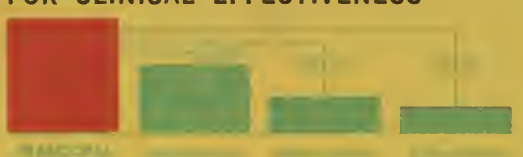
Considering the usual human dose, Trancopal, the first true "tranquilaxant," is four to ten times as potent per milligram.

FOR SAFETY



Comparative pharmacologic tests showed that Trancopal is up to thirteen times as safe, or up to thirteen times less toxic. The measure of safety was the LD_{50} in mice/usual human dose.

FOR CLINICAL EFFECTIVENESS



A clinical comparison in low back pain, torticollis, bursitis and anxiety states showed that Trancopal is up to four times as effective. Each of 40 patients received all four drugs in random rotation for several days. While each of the four drugs gave some relief, only the one providing the most effective relief was recorded.

INDICATIONS

Musculoskeletal
- Low back pain (lumbago)
- Neck pain (torticollis)
- Bursitis
- Rheumatoid arthritis
- Osteoarthritis
- Disc syndrome
- Fibrositis
- Joint disorders (ankle sprain, tennis elbow, etc.)
- Myositis
- Postoperative myalgias

Psychogenic
- Anxiety and tension states
- Dysmenorrhea
- Premenstrual tension
- Asthma
- Emphysema
- Angina

Neurologic
- Muscle spasm in paralysis agitans, multiple sclerosis, hemiplegia, poliomyelitis

TRANCOPAL thoroughly evaluated clinically

"In the treatment of conditions associated with skeletal muscle spasm there was a high percentage of satisfactory results (excellent, good or fair) in 310 patients (94%) out of 331 treated. . . . In 120 patients with simple anxiety or tension states results were satisfactory in 114 (95%). Dosage of chlormethazanone in all cases was 100 mg. t.i.d. As well as relieving the anxiety or tension state, chlormethazanone also allowed these patients to resume their usual occupations."

(Lichtman)

"The effect of this preparation in these cases [skeletal muscle spasm] was excellent and prompt . . ."

Trancopal ". . . was effective in relieving the symptoms of anxiety . . . [with a] profile of pharmacologic actions similar to meprobamate . . ."

(Mullin and Epifano)

"We have just started using it [Trancopal] for relaxing spastic musculature and are very much encouraged."

(Baker)

Trancopal

the first true "TRANQUILAXANT"

Dosage: One Caplet (100 mg.) orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours.

Supplied: Trancopal Caplets® (scored) 100 mg., bottles of 100.

Winthrop Laboratories • New York 18, N. Y.

• Baker, A. B.: Modern Med. 26:140, April 15, 1958. • Cohen, A. I.: In preparation. • Cooperat Study, Department of Medical Research, Winthrop Laboratories. • Gesler, R. M., and Coulston, Toxicol. & Appl. Pharmacol. To be published. • Gesler, R. M., and Surrey, A. R.: J. Pharmacol. & Exp Therap. 122:24A, Jan., 1958. • Gesler, R. M., and Surrey, A. R.: J. Pharmacol. & Exper. Ther 122:517, April, 1958. • Lichtman, A. L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958. • Mull W. G., and Epifano, Leonard: To be published. • Surrey, A. R., Webb, W. G., and Gesler, R J. Am. Chem. Soc. 80:3469, July 5, 1958

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re-evaluating tranquilizers?

READ WHAT CLINICIANS ARE NOW SAYING ABOUT ATARAX®

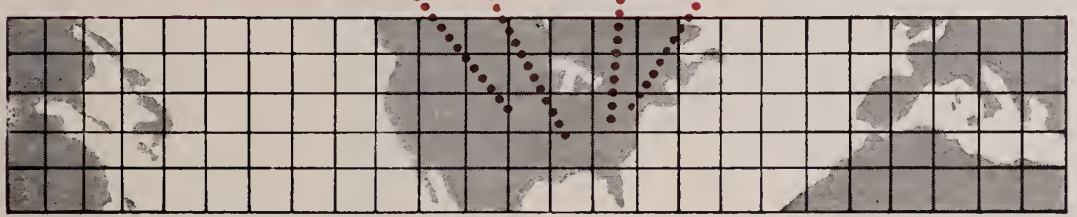
(brand of hydroxyzine)

IN GERIATRICS
"ability to decide correctly has increased, while the illogical response to anxiety has diminished."[1]

IN WORKING ADULTS
"especially well suited for ambulatory patients who must work, drive a car, or operate machinery."[3]

IN PEDIATRICS
"ATARAX appeared to reduce anxiety and restlessness, improve sleep patterns and make the child more amenable to the development of new patterns of behavior...."[2]

IN GENERAL
ATARAX is "effective in controlling tension and anxiety.... Its safety makes it an excellent drug for out-patient use in office practice."[4]



INVESTIGATORS AGREE ON OPTIMAL ATARAX DOSAGES

For childhood behavior disorders	10 mg. tablets Syrup	3-6 years, one tablet t.i.d. over 6 years, two tablets t.i.d. 3-6 years, one tsp. t.i.d. over 6 years, two tsp. t.i.d.
For adult tension and anxiety	25 mg. tablets Syrup	one tablet q.i.d. one tbsp. q.i.d.
For severe emotional disturbances	100 mg. tablets	one tablet t.i.d.
For adult psychiatric and emotional emergencies	Parenteral Solution	25-50 mg. (1-2 cc.) intramuscularly, 3-4 times daily, at 4-hour intervals. Dosage for children under 12 not established.

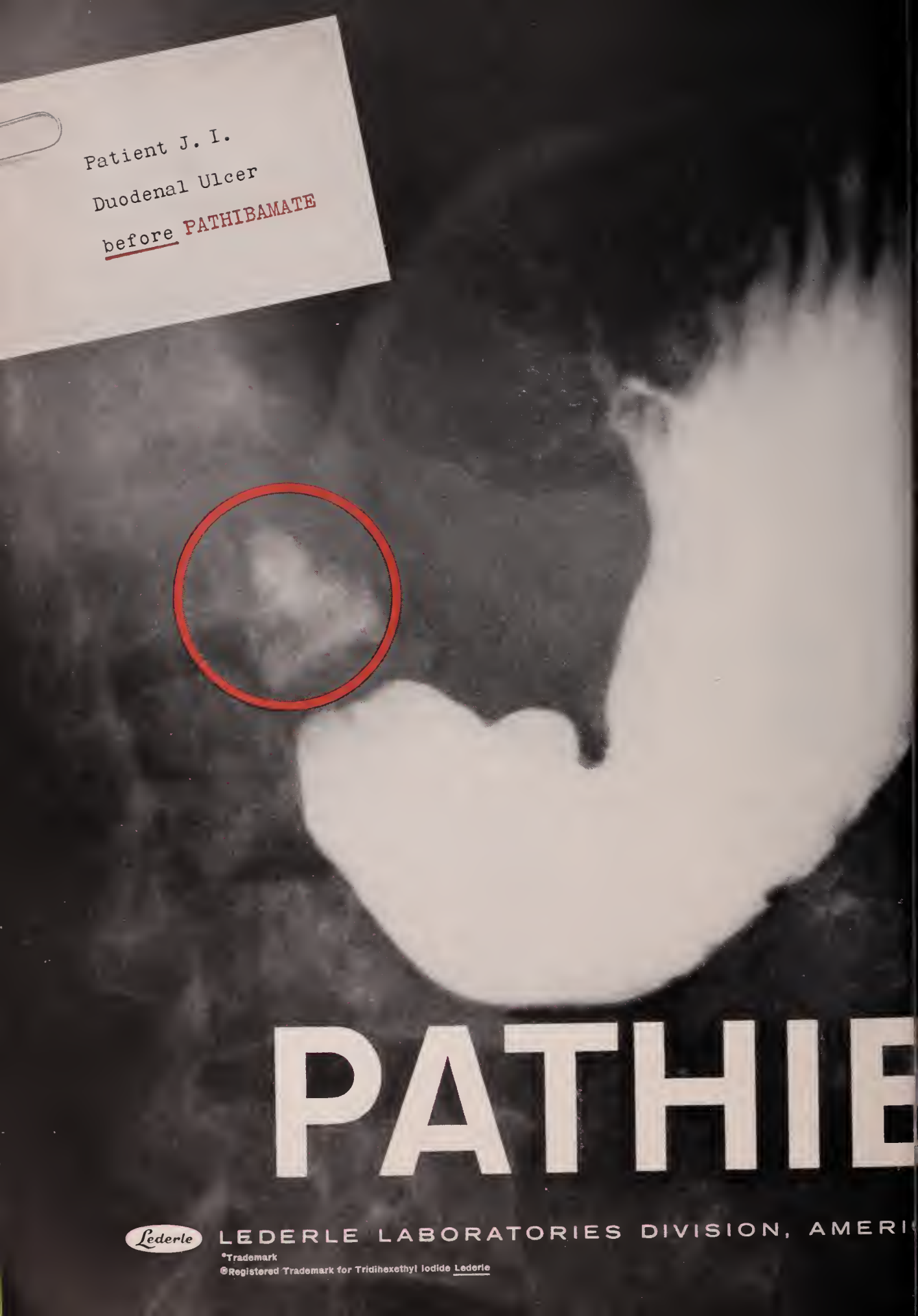
Supplied: Tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Smigel, J. O., et al.: J. Am. Ger. Soc., in press. 2. Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958. 3. Ayd, F. J., Jr.: New York J. Med. 57:1742 (May 15) 1957. 4. Menger, H. C.: New York J. Med. 58:1684 (May 15) 1958. 5. Coirault, M., et al.: Presse méd. 64:2239 (Dec. 26) 1956. 6. Bayart, J.: Presented at the International Congress of Pediatrics, Copenhagen, Denmark, July 22-27, 1956.

ATARAX

Rx

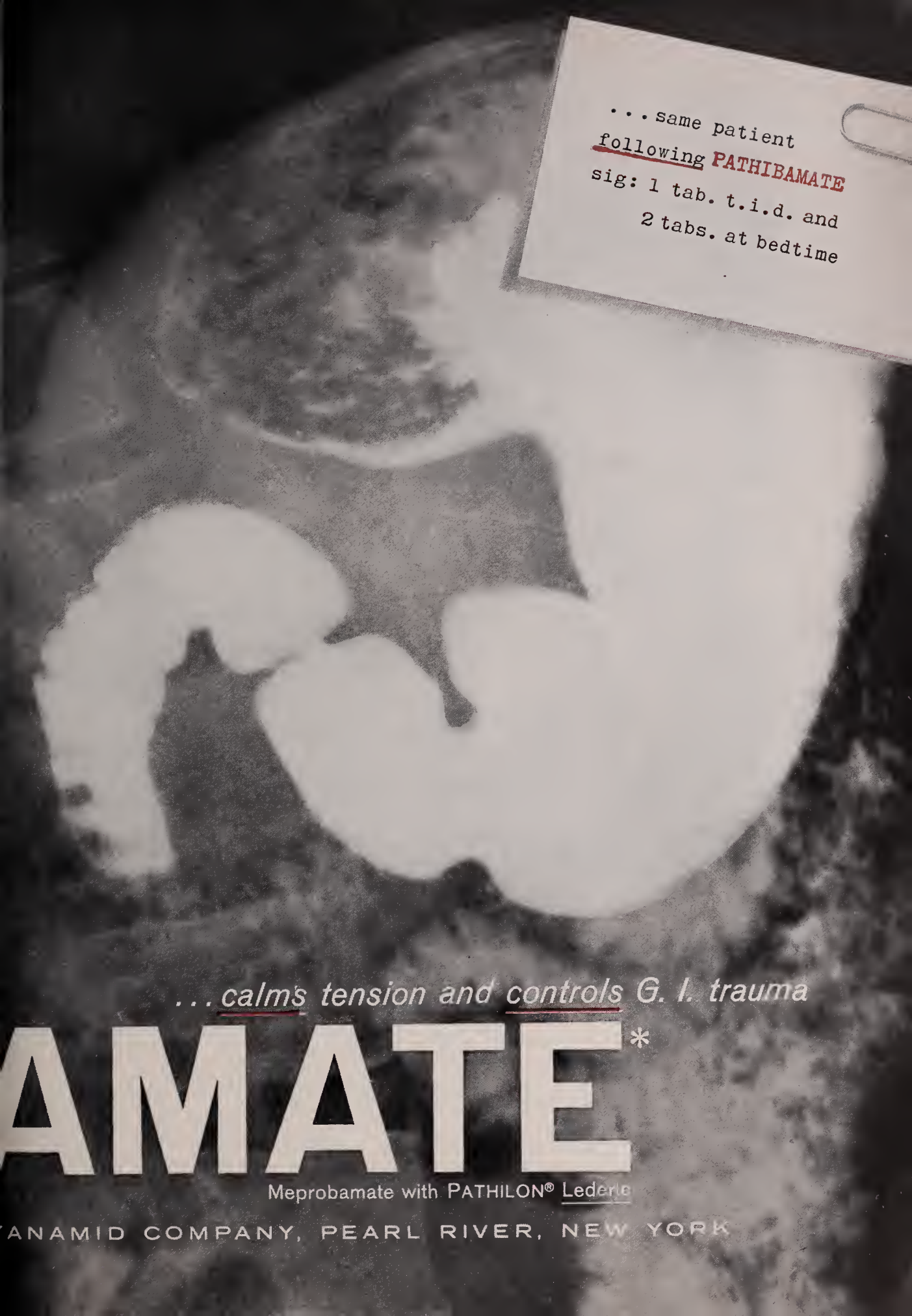
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- Freedom to add or replace equipment as improvements appear
- G.E. pays for insurance . . . assumes problem of collecting for equipment damage
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without capital outlay



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Sinusitis, otitis, tonsillitis, adenitis, bronchitis or pneumonitis develops as a serious bacterial complication in about one in eight cases of acute upper respiratory infection.(1) To protect and relieve the "cold" patient... ACHROCIDIN.

Usual dosage: 2 tablets or teaspoonfuls q.i.d. (equiv. 1 Gm. tetracycline). Each TABLET contains: ACHROMYCIN® Tetracycline HCl (125 mg.); phenacetin (120 mg.); caffeine (30 mg.); salicylamide (150 mg.); chlorothen citrate (25 mg.). Also as SYRUP, caffeine-free.

(1) Estimate based on epidemiologic study by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122, Jan. 1933.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

SPONTIN IN SERIOUS

A Special Report from Abbott
to the Medical Profession
on a Year's Clinical Experience
with SPONTIN®
(Ristocetin, Abbott)

In a Spanish province, a patient lay dying of endocarditis. A short wave radio appeal for SPONTIN was intercepted by a Baltimore physician. The antibiotic was immediately flown to this faraway land, and 10 days later—the patient had recovered.

In Chicago, a moribund patient had been administered 18 combinations of 10 different antibiotics without success. Involved was a hospital-acquired staphylococcal pneumonia—plus complications. SPONTIN was substituted and the patient lived.

A five-week-old infant was critically ill with staphylococcal enteritis. Treatment failures included erythromycin and chloramphenicol. Three days of SPONTIN saved this life. The list is long and impressive and it grows daily.

Recently, a study[1] was made of serious and resistant staphylococcal infections reported to Abbott Laboratories. Many of these cases had serious complicating diseases—many were moribund, or almost so, at the time SPONTIN was started. Yet, out of the 160 staphylococcal cases studied, 93 were reported cured and 38 improved after the administration of SPONTIN.

Out of the total of 251 patients with severe infections caused by gram-positive or mixed organisms, 149 were reported cured and 53 others improved. And the record for pediatric practice was every bit as good.

Additionally, SPONTIN continues to exhibit exceptional bactericidal activity against coccal infections[2]. And, according to another study, SPONTIN provides successful short-term therapy in endocarditis[3].

Only last October, at the Antibiotics Symposium in Washington, D. C., a panel of six leading antibiotic experts placed SPONTIN at the top of all other commercially-available antibiotics for treating serious staphylococcal infections. Also, six papers—all dealing with the effectiveness of ristocetin (SPONTIN®) in treating staphylococcal infections—were presented at the Symposium.

One of the most encouraging aspects of the year's literature on SPONTIN is the increasing testimony to its safety. As the months have passed and cases have accumulated by the hundreds, it has become apparent that careful attention to dosage recommendations has practically eliminated toxicity and side effects as serious obstacles to therapy. Also, recent improvements have been made in the manufacture of SPONTIN; the drug is now made from pure crystals.

A recent report[4] in the Journal of the American Medical Association concluded, "It is our opinion that, if proper precautions are observed, ristocetin is a [well tolerated] and potent agent to employ in the treatment of staphylococcal infections." And in another study, after successfully treating 28 patients with a variety of staphylococcal infections, the authors reported[5], "No serious complications were noted."

Few more dramatic records have been written in such a short space of time. SPONTIN has proved itself to be a good answer, perhaps the best answer at present, to the resistant staphylococcal problem — and of real value in other serious coccal infections. It may well be your answer when you're confronted with a serious infection.

Abbott

901066

STAPHYLOCOCCAL INFECTIONS

Excerpts from Reports Read at the Antibiotics Symposium

Spontin In Treating Severe Respiratory Infections —"In 13 of 20 patients the results were excellent, with clinical response being evident within one to four days after institution of therapy. In three additional patients, there was some degree of improvement in pneumonic processes superimposed on tuberculosis in two cases and on pulmonary neoplasm in one. In all other cases, serious antecedent pathology undoubtedly influenced the negative or equivocal response to ristocetin therapy.[6]"

Spontin In Treating Staphylococcal Infections—After successfully treating 28 patients, the authors wrote, "Ristocetin or Spontin has proved to be bactericidal and bacteriostatic, particularly for the *Staphylococcus aureus,* which is often resistant to many other antibiotics.[5]"

Spontin In Treating Seven Difficult Cases – "Ristocetin has produced excellent results in eradicating, mitigating or preventing infection in seven selected difficult cases. Six of the seven cases involved *Staphylococcus aureus* which did not respond to chemotherapy with other antibiotics.[7]"

Spontin Blood Levels In Children – "Ristocetin was administered as a single intravenous injection of 12.5 milligrams per kilogram. This resulted in serum levels ranging from 1.3 to 10.6 mcg. after two hours with a gradual fall to a level of 0.7 mcg. per cubic centimeter or less after 12 hours.[8]"

Spontin In Treating Staphylococcal Pneumonia —"Ristocetin was used in the treatment of 24 patients with staphylococcal pneumonia, 17 of whom had failed to respond to previously administered antibiotics. Complete clearing of pneumonitis was obtained in 16 patients and significant improvement occurred in two others. Two patients died of pneumonia; four others succumbed to other lethal diseases.[9]"

Spontin In Treating Children and Adults – "Ristocetin completely controlled severe staphylococcal infections in 11 adults and six children who received adequate therapy.[10]"

1. Totals represent published reports and personal communications to Abbott Laboratories.
2. Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 15, 16, 17, 1958.
3. Romansky, M. J., and Holmes, R., Successful Short-Term Therapy of Enterococcal and Staphylococcal Endocarditis with Ristocetin–Seven Patients. Preliminary Report, Antibiotics Annual, 1957-58, p. 187.
4. J. A. M. A., 167:1584, July 26, 1958.
5. Bush, L. F., et al., The Use of Ristocetin (Spontin) in Staphylococcal Infections, In Press, Antibiotics Annual, 1958-59.
6. Billow, F. J., et al., Clinical Observations on Ristocetin–A Preliminary Report on its Efficacy and Toxicity in 20 Unselected Severe Respiratory Infections, In Press, Antibiotics Annual, 1958-59.
7. Miller, J. M., et al., Ristocetin in the Treatment of Seven Selected Difficult Cases, In Press, Antibiotics Annual, 1958-59.
8. Asay, L. D., et al., Ristocetin Serum Levels in Children, In Press, Antibiotics Annual, 1958-59.
9. Schumacher, L. R., et al., Experiences with Ristocetin in Staphylococcal Pneumonia: Observations in 23 Cases, In Press, Antibiotics Annual, 1958-59.
10. Terry, R. B., Ristocetin in Children and Adults, In Press, Antibiotics Annual, 1958-59.

BONADOXIN®

(tablets and drops)

STOPS STOPS STOPS MORNING SICKNESS



BONADOXIN Tablets relieve nausea and vomiting of pregnancy in 9 out of 10,[1-7] often within a few hours.

Moreover, a controlled study of 620 cases reported that with BONADOXIN "toxicity and intolerance [are] zero."[1] BONADOXIN is rarely soporific. It is free from the risks associated with overpotent tranquilizer-antinauseants.

NOTE: BONADOXIN has also been shown highly effective in relieving nausea and vomiting associated with: anesthesia, radiation sickness, Meniere's syndrome, labyrinthitis, cerebral arteriosclerosis, and motion sickness.

Each tiny pink-and-blue BONADOXIN tablet contains:

Meclizine HCl (25 mg.) . . . for antivertiginous, antinauseant effects.

Pyridoxine HCl (50 mg.) . . . for specific metabolic replacement.

DOSAGE: usually one tablet at bedtime. Severe cases may require another dose on arising.

SUPPLIED: tiny pink-and-blue tablets, bottles of 25 and 100. Fruit-flavored, clear green syrup in 30 cc. dropper bottles.

Infant colic? BONADOXIN DROPS are antispasmodic...stop colic in 84%,[8-10] without the risk of belladonna and barbiturates.

Each cc. contains:
Meclizine dihydrochloride . . 8.33 mg.
Pyridoxine hydrochloride . . . 16.67 mg.

Dosage:

under 6 months . .	0.5 cc.	2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years	1.5 to 2 cc.	
2 to 6 years . .	3 cc.	
adults and children over 6	1 tsp. (5 cc.)	

References: 1. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957. 2. Groskloss, H. H., et al.: Clin. Med. 2:885 (Sept.) 1955. 3. Weinberg, A., and Werner, W. E. F.: Am. Pract. & Digest Treat. 6:580 (April) 1955. 4. Crawley, C. R.: West. J. Surg. 8:463 (Aug.) 1956. 5. Tarlikoff, G.: Clin. Med. 3:223 (March) 1955. 6. Dunn, R. D., and Fox, L. P.: Clinical exhibit. 7. Codling, J. W., and Lowden, R. J.: Northwest Med. 57:331 (March) 1958. 8. Dougan, H. T.: Personal communication. 9. Leonard, C. L.: Personal communication. 10. Steinberg, C. L.: Personal communication.

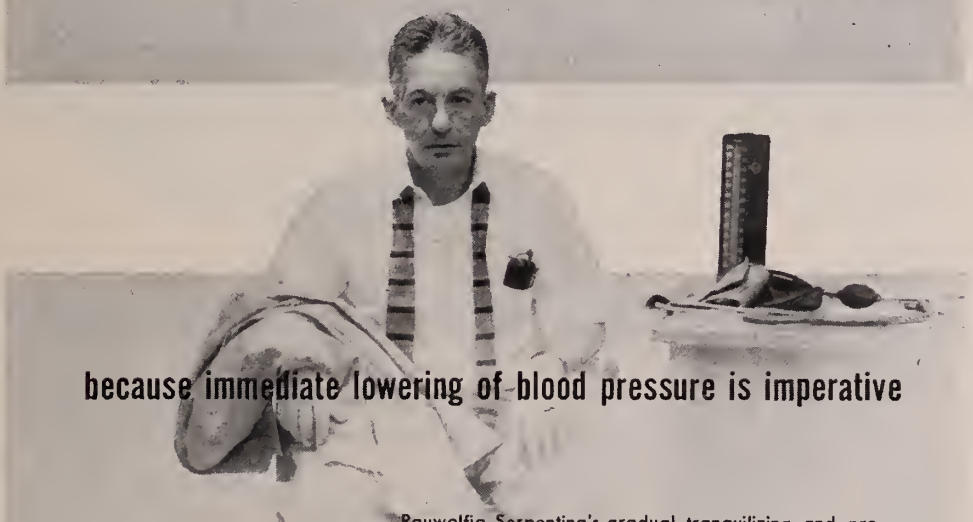
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▪ prompt, aggressive
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▪ a reliable defense against
monilial complications

both are often needed when
bacterial infection occurs



for a direct strike at infection

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It provides a direct strike at all tetracycline-susceptible organisms (most pathogenic bacteria, certain rickettsias, certain large viruses, and Endamoeba histolytica).

It provides the new chemical form of the world's most widely prescribed broad spectrum antibiotic.

It provides unsurpassed initial blood levels — higher and faster than older forms of tetracycline — for the most rapid transport of the antibiotic to the site of infection.

for protection against monilial complications

Mysteclin-V contains Mycostatin

It provides the antifungal antibiotic, first tested and clinically confirmed by Squibb, with specific action against Candida (Monilia) albicans.

It acts to prevent the monilial overgrowth which frequently occurs whenever tetracycline or any other broad spectrum antibiotic is used.

It protects your patient against antibiotic-induced intestinal moniliasis and its complications, including vaginal and anogenital moniliasis, even potentially fatal systemic moniliasis.

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with a medical splint



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- **Sodium lauryl sulfate**—a pepsin inactivator—minimizes pepsin erosion and further destruction of tissue to hasten healing of lesions.

Composition: 1 tablespoonful (15 cc.) of suspension or 2 capsules contain: methscopolamine nitrate 2.5 mg., dihydroxy aluminum aminoacetate 900 mg., magnesium hydroxide 75 mg., and sodium lauryl sulfate 40 mg.

Dosage: 1 tablespoonful or 2 capsules after each meal and at bedtime, as required.

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Now- All cold symptoms can be controlled



Provides Triaminic for more complete and more effective relief from nasal and paranasal congestion because of systemic transport to *all* respiratory membranes—without drawbacks of topical therapy.†

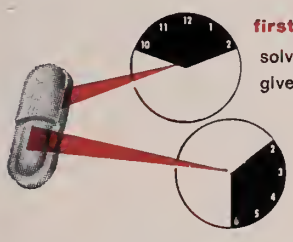
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Provides Dormethan (brand of dextromethorphan HBr) for non-narcotic antitussive action on the cough reflex center in the medulla—as effective as codeine but without codeine's drawbacks.

Provides terpin hydrate, classic expectorant to thin inspissated mucus and help the patient clear the respiratory passages.

†Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. Fabricant, N. D.: E. E. N. T. Monthly 37:460 (July) 1958. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

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Contains* **TRIAMINIC *to* STOP *running noses and open stuffed noses orally*

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AS PROVED BY excellent safety record—extremely well tolerated; discontinuance of medication was necessary in only 11 of 3,280 patients.†

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New Oral Suspension (raspberry-flavored), 2 oz. bottle, 125 mg. per teaspoonful (5 cc.).
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†Literature and bibliography available on request.

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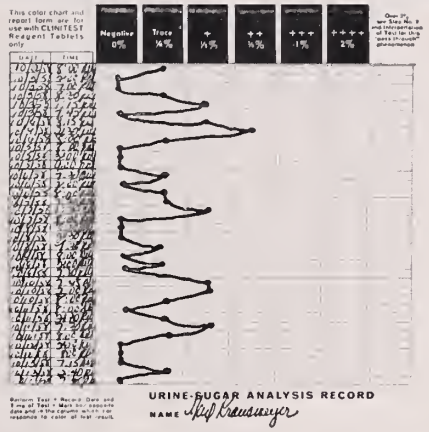
Blood sugar levels. In renal glycosuria they are normal; in untreated diabetes, fasting blood sugars are usually 130 mg.% or over and postprandial levels 170 mg.%, or more.

Source: Joslin, E. P.; Root, H. F.; White, P., and Marble, A.: The Treatment of Diabetes Mellitus, ed. 9, Philadelphia, Lea & Febiger, 1952, pp. 701-702.

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*GP *16*:121 (August) 1957.



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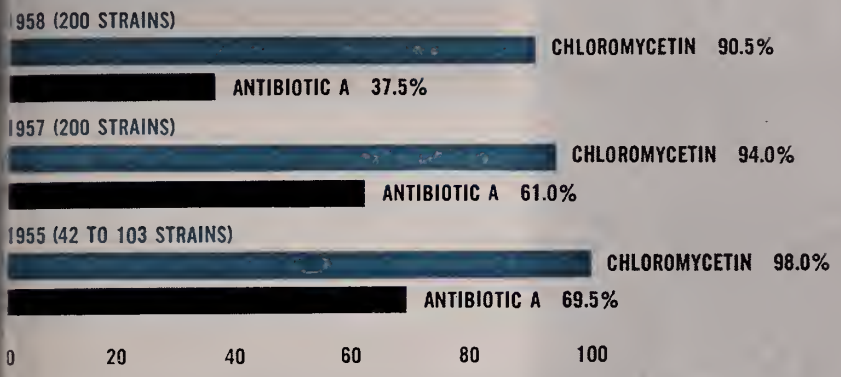
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REFERENCES: (1) Holloway, W. J., & Scott, E. G.: *Delaware M. J.* 30:175, 1958. (2) Roy, T. E., *et al.*: *Canad. M.A.* 77:844, 1957. (3) Markham, N. P., & Shott, H. C. W.: *New Zealand M. J.* 57:55, 1958. (4) Royer, A., in Welch, H., & Marti-Ibañez, F.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 783. (5) Blair, J. E. & Carr, M.: *J.A.M.A.* 166:1192, 1958. (6) Caswell, H. T., *et al.*: *Surg., Gynec. & Obst.* 106:1, 1958. (7) Fekety, F. R. *et al.*: *Am. J. Pub. Health* 48:298, 1958. (8) Godfrey, M. E., & Smith, I. M.: *J.A.M.A.* 166:1197, 1958. (9) Kessler, A. D. & Scott, R. B.: *J. Dis. Child.* 96:294, 1958. (10) Shaffer, T. E.: *J. Michigan M. Soc.* 57:851, 1958.

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N VITRO SENSITIVITY OF PATHOGENIC STAPHYLOCOCCI TO CHLOROMYCETIN AND
O ANOTHER WIDELY USED BROAD-SPECTRUM ANTIBIOTIC FOR 1958, 1957, and 1955*



*Adapted from Holloway and Scott.[1] In this study CHLOROMYCETIN and Antibiotic A were used in identical strengths of 5 mcg.

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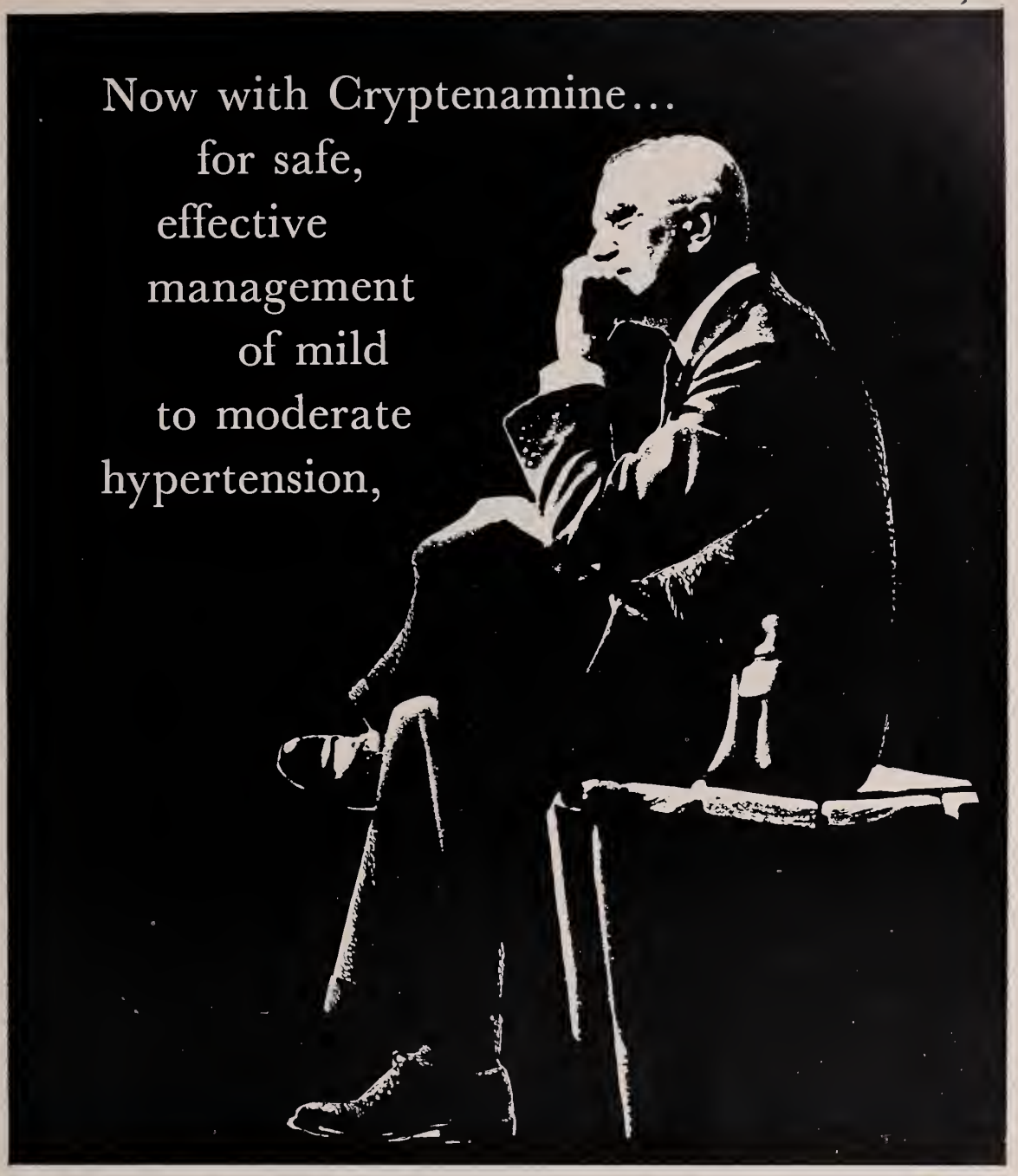
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Vitamin D	1,000 U.S.P. units
Vitamin C	75 mg.
Vitamin B_1	3 mg.
Vitamin B_2	3 mg.
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References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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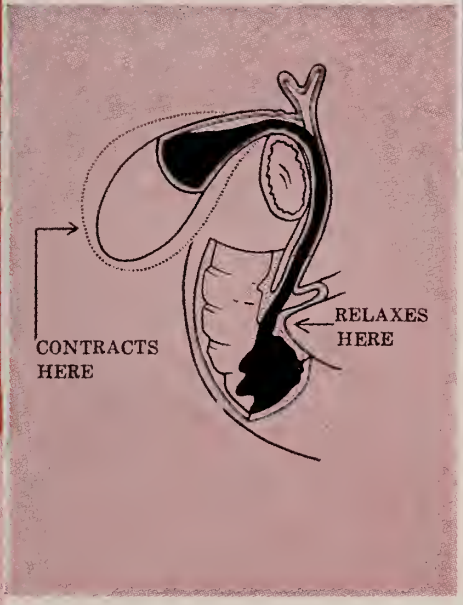
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1. Herland, A. L., Lowenstein, A.: Quart. Rev. Surg. Obst. & Gynec. 14:196 (Dec.) 1957

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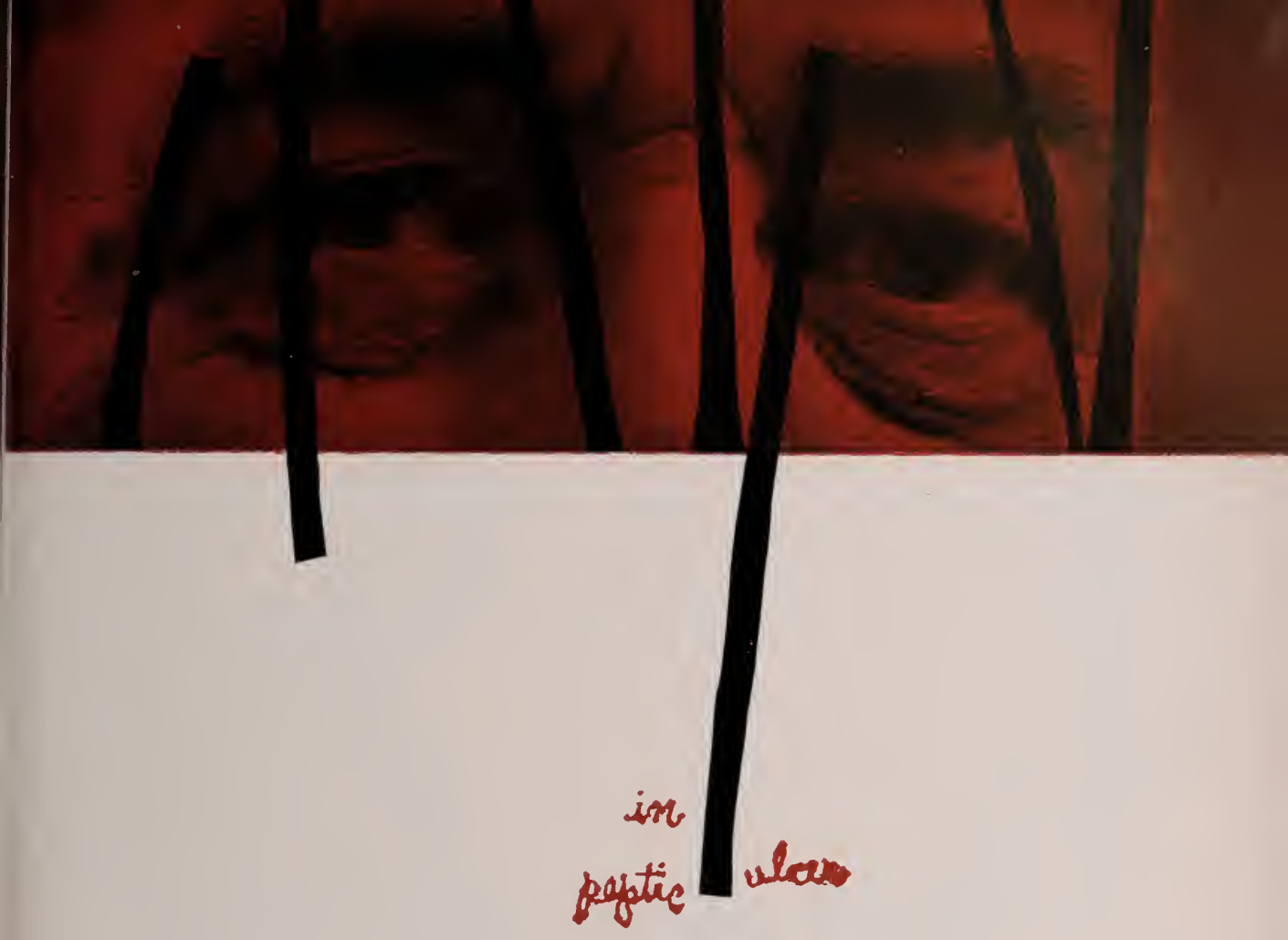
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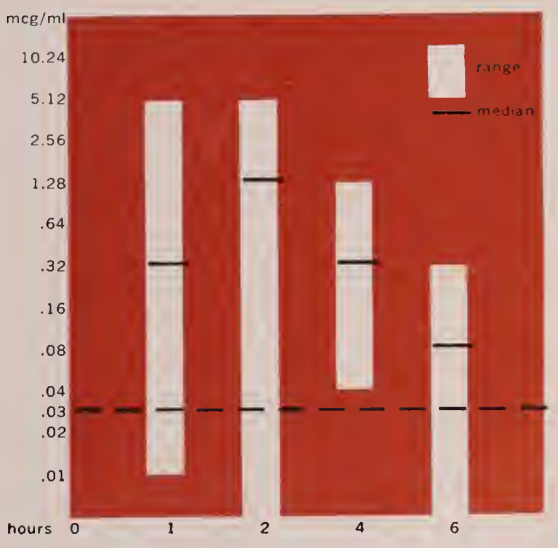
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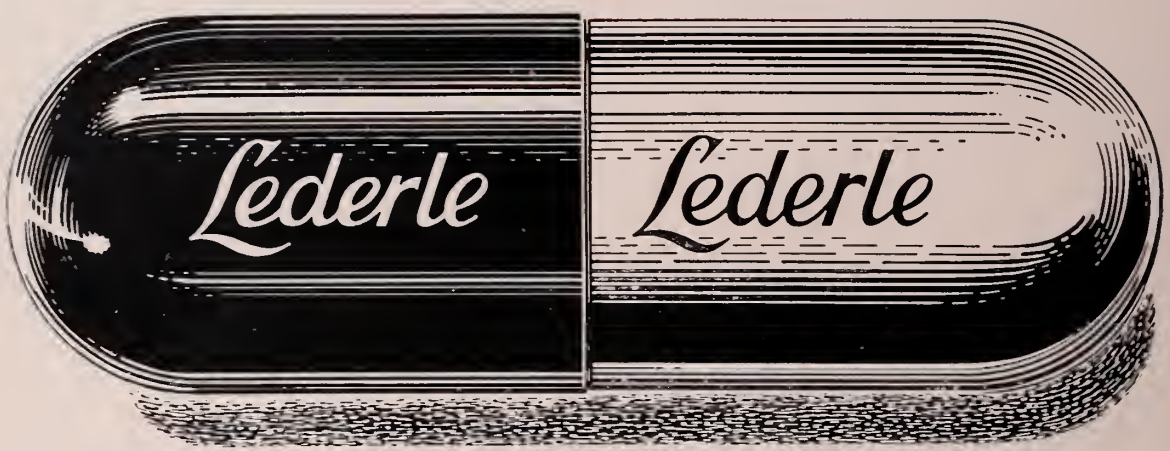
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Achromycin® V
Tetracycline with Citric Acid Lederle

SUPPLIED IN CAPSULES OF 250 MG.
WITH 250 MG CITRIC ACID,
AND 100 MG. WITH 100 MG CITRIC ACID.

Lederle LEDERLE LABORATORIES, A DIVISION OF AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

More effective clinically

in LOW BACK PAIN

TORTICOLLIS

BURSITIS and

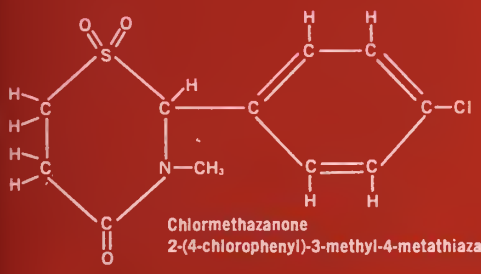
ANXIETY STATES

Trancopal®

the first true tranquilaxant

/ MUSCLE RELAXANT

and TRANQUILIZER



Chlormethazanone
2-(4-chlorophenyl)-3-methyl-4-metathiazanone-1-dioxide

Unrelated chemically to any other therapeutic agent in current use. Better tolerated and safer than older drugs.

for clinical results in 4092 patients *see inside*

Trancopal

the first true

*TRANQUILAXANT**

MUSCLE RELAXANT
and TRANQUILIZER

clinical results in 4092 patients[5]

***tran-qui-lax-ant** (tran'kwi-lak'sant)
[< L. tranquillus, quiet; L. laxare, to loosen, as the muscles]

Clinical Comments

"We have just started using it [Trancopal] for relaxing spastic musculature and are *very much encouraged.*"[1]

Baker, University of Minnesota Medical School

"Chlormethazanone [Trancopal] not only relieved *painful muscle spasm*, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."[2]

Lichtman, New York Polyclinic Medical School and Hospital

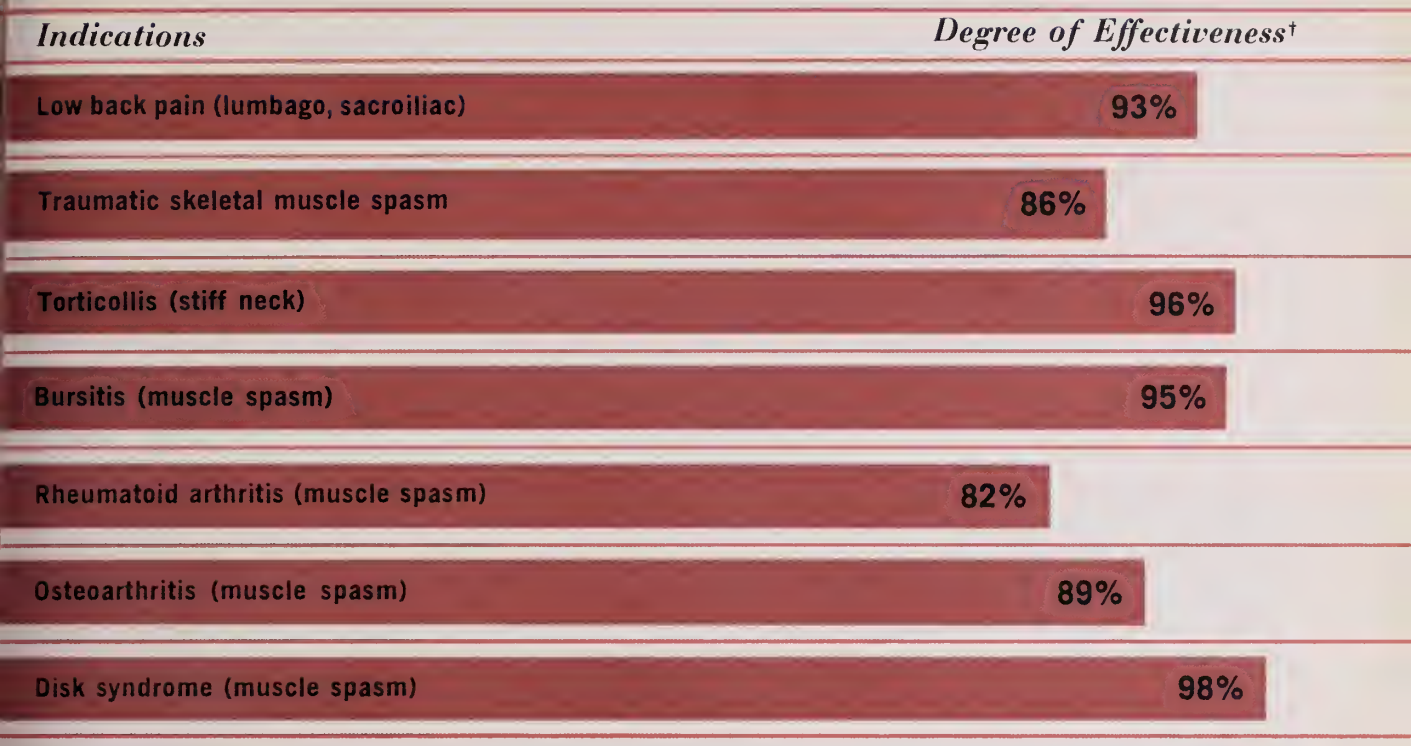
"The effect of this preparation in these cases [skeletal muscle spasm] was *excellent and prompt . . .*"[3]

Mullin and Epifano, Long Island College Hospital

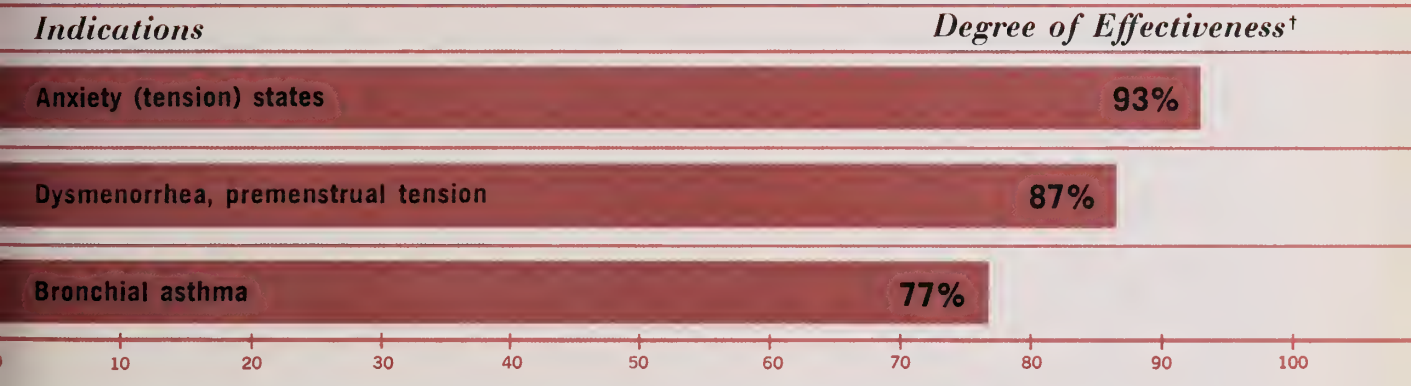
"In 120 patients with *anxiety or tension states*, 114 received satisfactory control of their condition. *Severe dysmenorrhea* and *premenstrual tension* in 65 patients refractory to the usual medications were relieved satisfactorily in 56."[4]

Lichtman

91% Effective in Musculoskeletal Disorders



89% Effective in Psychogenic Disorders



†*Excellent, good and fair*

The results of clinical studies of over 4092 patients by 105 physicians demonstrate that Trancopal often is effective when other drugs have failed. From these studies it is clear that Trancopal probably can provide more help for a greater number of tense, spastic, and/or emotionally upset patients than any other pharmaceutical agent in current use.

Dosage:
Usual adult dose, 1 Caplet (100 mg.) three or four times daily. Children (from 5 to 12 years), ½ Caplet (50 mg.) three or four times daily.

Supplied:
Trancopal Caplets® (peach colored, scored) 100 mg., bottles of 100 and 1000.



Winthrop

Trancopal

the first true tranquilaxant

MUSCLE RELAXANT and TRANQUILIZER

ADVANTAGES OF TRANCOPAL

- Lower incidence of side effects than with zoxazolamine, methocarbamol or meprobamate.
- No known contraindications. Blood pressure, pulse rate, respiration and digestive processes unaffected by therapeutic dosage. No effects on hematopoietic system or liver and kidney function.
- Low toxicity. "As safe as aspirin."
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.
- No perceptible soporific effect, even in high dosage.

INDICATIONS

Musculoskeletal

Low back pain (lumbago)
Neck pain (torticollis, etc.)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disk syndrome
Fibrositis
Joint disorders (ankle sprain, tennis elbow, etc.)
Myositis
Postoperative myalgias

Psychogenic

Anxiety and tension states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris

Neurologic

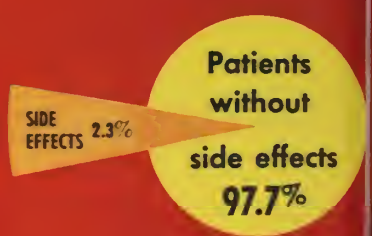
Muscle spasm (in paralysis agitans, multiple sclerosis, hemiplegia, cerebral palsy)

SAFETY

"As Safe As Aspirin"



Comparative pharmacologic tests showed that Trancopal is up to thirteen times as safe, or up to thirteen times less toxic. The measure of safety was the LD_{50} in mice/usual human dose.



INCIDENCE OF SIDE EFFECTS WITH TRANCOPAL IN 4262 PATIENTS.

SUPPLIED

Trancopal Caplets (peach colored, scored) 100 mg., bottles of 100 and 1000.

REFERENCES

1. Bacon, A. B.: Drugs to relieve increased tonus, spasticity, and rigidity of muscles. Modern Med. 26: 140, Apr. 15, 1958. • 2. Lichtman, A. L.: New developments in muscle relaxant therapy. Kentucky Acad. Gen. Pract. J. 4: 26, Oct., 1958. • 3. Mullen, W. G., and Emilano Leonard: To be published. • 4. Lichtman, A. L.: To be published. • 5. Cooperative Study, Department of Medical Research, Winthrop Laboratories.

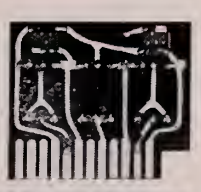
Winthrop Laboratories • New York 18, N. Y.

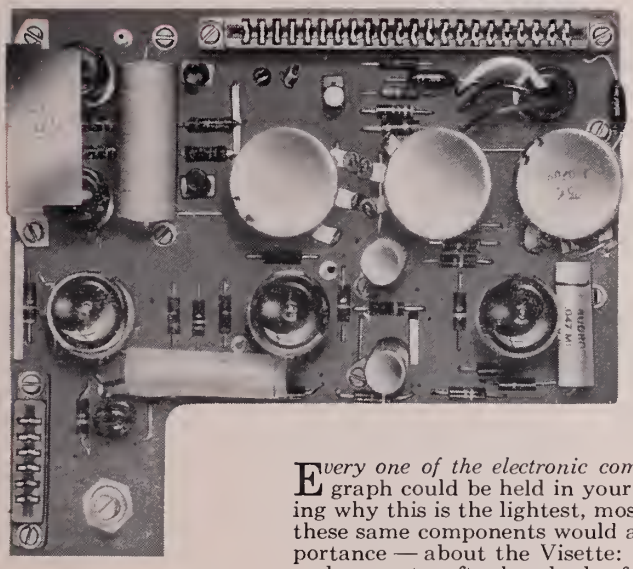
Trancopa (brand of chlormethazanone) and Caplets, trademarks reg. U. S. Pat. Off.

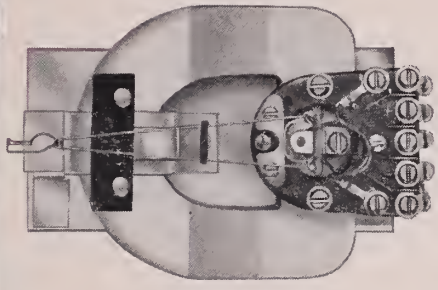
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They've put cardiography on the road . . . *with accuracy*









Every one of the electronic components used in a Visette electrocardiograph could be held in your two hands — dramatically demonstrating why this is the lightest, most compact ECG in existence today. But these same components would also prove something else — of *equal* importance — about the Visette: why it can "*take it*", and *remain* stable and accurate, after hundreds of trips to and from your office.

As you looked at these examples of completely modern electronics used in the Visette, you would see numerous *transistors* — rugged, miniature, solid devices which do many of the jobs vacuum tubes do, but with the advantages of much greater durability, preferable electrical characteristics in certain applications, and an extremely long operating life. You'd also see wiring which was *printed* on thin, tough phenolic panels — in place of hundreds of separate pieces of wire; such connections, of course, can't shake loose under constant jarring — and they also make possible "building block" circuitry in the Visette with separate, easily accessible plug-in panels.

And similar advantages in greater ruggedness, longer life, better performance or smaller size would be found in other Visette elements. *Each one was chosen for the contribution it could make in achieving a smaller, lighter, more rugged ECG — without sacrificing accuracy.* Together, they become part of an electrocardiograph offering unequalled operating convenience and portability. More than 3000 doctors today know this from their own experience — in using a Visette in their own practices.

Descriptive literature, "Questions and Answers" on the Visette in handy folder form, or details of the Sanborn 15-day Test-and-Return Plan available on request. Address "Inquiry Director."



Model 300 Visette electrocardiograph, $625 delivered, continental U. S. A.

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running noses



and open stuffed noses orally

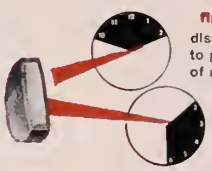
with TRIAMINIC, the oral nasal decongestant

- in nasal and paranasal congestion
- in sinusitis
- in postnasal drip
- in allergic reactions of the upper respiratory tract

safer and more effective than topical medication

- reaches *all* respiratory membranes systemically
- avoids "nose drop addiction"
- presents no problem of rebound congestion
- provides longer-lasting relief

Relief with Triaminic is prompt and prolonged because of this special timed-release action . . . beneficial effect starts in minutes, lasts for hours.



Each TRIAMINIC *Tablet provides:*

Phenylpropanolamine HCl . . .	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

One-half of this formula is in the outer layer, the other half is in the core.

Dosage: One tablet in the morning, mid-afternoon and in the evening, if needed.

Triaminic®

Also available: For the occasional patient who requires only half dosage: timed-release TRIAMINIC JUVELETS. Each Juvelet is equivalent to ½ of a Triaminic Tablet.

For those patients who prefer liquid medication: TRIAMINIC SYRUP. Each 5 ml. tsp. of this palatable syrup is equivalent to ¼ of a Triaminic Tablet.

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska • Peterborough, Canada



From This to This



All this for one monthly fee

- Enjoy the most modern x-ray facilities . . . avoid obsolescence losses
- No surprise "extras" — covers periodic inspection, maintenance, replacement tubes, parts
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without capital outlay

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Here's the perfect answer for a cost-saving x-ray installation, easy to keep abreast of important new developments. G-E Maxiservice ties up *none* of your capital . . . eliminates trade-in losses — progress determines your time for exchange, not finances. In effect, you contract for *utility, convenience, flexibility* and *service,* not for just equipment.

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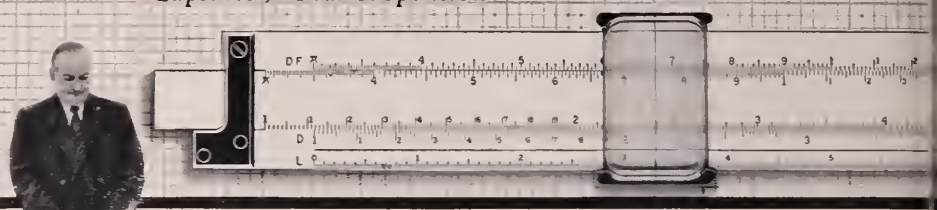
℞ PRONOUNCED TAY-O

Tao

(triacetyloleandomycin)

Capsules / Oral Suspension

* *designed for superior control of common Gram-positive infections*

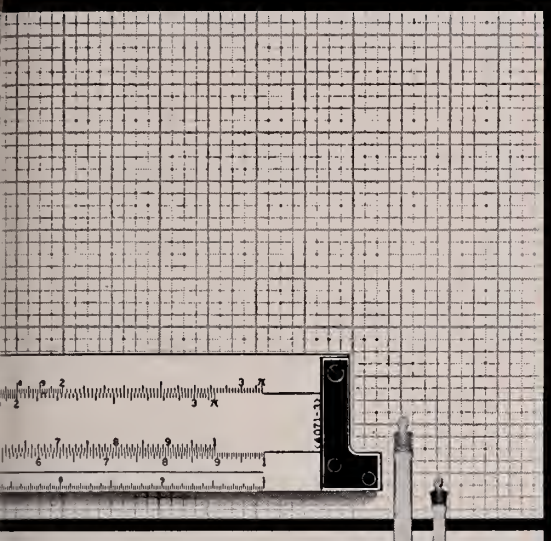




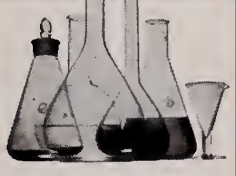
in the patient:

95% effective in published cases[1-8]

Conditions treated	No. of Patients	Cured	Improved	Failure
ALL INFECTIONS	**558**	**448**	**80**	**30**
Respiratory infections	**258**	**208**	**31**	**19**
Pharyngitis and/or tonsillitis	65	58	5	2
Pneumonia	90	66	17	7
Infectious asthma	44	38	–	6
Otitis media	31	29	2	–
Other respiratory (bronchitis, bronchiolitis, bronchiectasis, pneumonitis, laryngotracheitis, strep throat)	28	17	7	4
Skin and soft tissue infections	**230**	**191**	**38**	**1**
Infected wounds, incisions and lacerations	41	33	8	–
Abscesses	51	43	8	–
Furunculosis	58	51	6	1
Acne, pustular	43	28	15	–
Pyoderma	19	19	–	–
Other skin and soft tissue (infected burns, cellulitis, impetigo, ulcers, others)	18	17	1	–
Genitourinary infections	**28**	**19**	**3**	**6**
Acute pyelitis and cystitis	10	8	2	–
Urethritis with gonorrhea or cystitis	8	8	–	–
Pyelonephritis	4	1	–	3
Salpingitis	5	1	1	3
Pelvic inflammation with endometriosis	1	1	–	–
Miscellaneous (adenitis, enteritis, enterocolitis, subacute bacterial endocarditis, fever, hematoma, staphylococcus carriers, osteomyelitis, tenosynovitis, septic arthritis, acute bursitis, periarthritis)	**42**	**30**	**8**	**4**

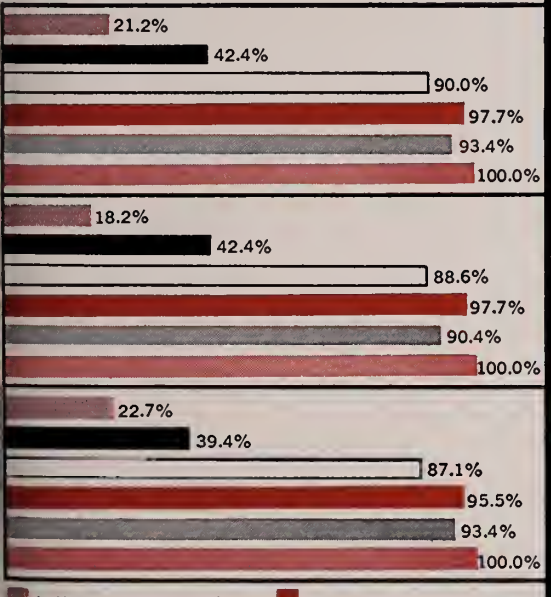


in the laboratory:



over 90% effective against resistant staph

COMPARATIVE TESTS BY THREE METHODS (DISC, TUBE DILUTION, CYLINDER PLATE) ON 130 STAPHYLOCOCCI[9]



Antibiotic A 2-10 units
Antibiotic B 5-30 mcg.
Antibiotic C 5-30 mcg.
TAO 2-15 mcg.
Antibiotic D 2-15 mcg.
Antibiotic E 5-30 mcg.

Percentage of organisms inhibited by the range of concentrations listed for each antibiotic.

Other Tao advantages:

Rapidly absorbed—stable in gastric acid,[7] TAO needs no retarding protective coating

Low in toxicity—freedom from side effects in 96% of patients treated; cessation of therapy is rarely required

Highly palatable—"practically tasteless"[7] active ingredient in a pleasant cherry-flavored medium.

Dosage and Administration: Dosage varies according to the severity of the infection. For adults, the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. For children 8 months to 8 years, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since TAO is therapeutically stable in gastric acid, it may be administered without regard to meals.

Supplied: TAO Capsules—250 mg. and 125 mg., bottles of 60. TAO for Oral Suspension—1.5 Gm., 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. Koch, R., and Asay, L. D.: J. Pediat., in press. 2. Leming, B. H., Jr., et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 3. Meiman, et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 4. Olansky, S., and McCormick, G. E., Jr.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 5. Shubin, H., et al.: Antibiotics Annual 1957-1958, New York, N. Y., Medical Encyclopedia, Inc., 1958, p. 679. 6. Isenberg, H., and Kareiitz, S.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 7. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy 5:527 (Aug.) 1958. 8. Kapian, M. A., and Goldin, M.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 9. Truant, J. P.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958.

TAO dosage forms—for specific clinical situations

TAO Pediatric Drops

For children—flavorful, easy to administer.

Supplied: When reconstituted, 100 mg. per cc. Special calibrated droppers—5 drops (approx. 25 mg.) and 10 drops (approx. 50 mg.). 10 cc. bottle.

TAO-AC (TAO analgesic, antihistaminic compound)

To eradicate pain and physical discomfort in respiratory disorders.

Supplied: In bottles of 36 capsules.

TAOMID* (TAO with triple sulfas)

For dual control of Gram-positive and Gram-negative infections.

Supplied: Tablets, bottles of 60. Oral Suspension, bottles of 60 cc.

Intramuscular or Intravenous

For direct action—in clinical emergencies.

Supplied: In 10 cc. vials.

*TRADEMARK

New York 17, N.Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being

VARIDASE* BUCCAL TABLETS

Streptokinase-Streptodornase Lederle

Controls Inflammation and Swelling...Relieves Pain... Promotes Healing Through Enchancement of Fibrinolysis at the Site of Trauma or Infection.

References: 1. Innerfield, I.; Shub, H., and Boyd, L. J.: New England J. Med. 258: 1069 (May 24) 1958. 2. Miller, J. M.; Godfrey, G. C.; Ginsberg, M. J., and Papastrat, C. J.: J. A. M. A. 166:478 (Feb. 1) 1958. 3. Davidson, E; Prigot, A., and Maynard, A. de L.: Harlem Hosp. Bull. II: 1 (June) 1958 *Reg. U. S. Pat. Off.



TO ACCELERATE THE RECOVERY PROCESS

Established Efficacy and Safety: For five years VARIDASE, in parenteral form, has been used with success in many thousands of cases. Its ability to control inflammation, swelling and associated pain, aid penetration of antibiotics, and hasten healing has been demonstrated in such conditions as severe trauma, infected ulcerations, and following extensive surgery.

Now, Parenteral Effectiveness . . . Simple Buccal Route: New VARIDASE Buccal Tablets give your patients the benefits of systemic VARIDASE therapy without the inconvenience of repeated injections. Absorbed through the buccal mucosa in fully effective amounts, VARIDASE Buccal Tablets may be used as practical adjunctive therapy in your practice within these broad classifications:

Inflammation and edema associated with: trauma and infection • cellulitis • abscess • hematoma • thrombophlebitis • sinusitis • uveitis • chronic bronchitis • leg ulcer • chronic bronchiectasis.

Each VARIDASE Buccal Tablet contains 10,000 Units Streptokinase and 2,500 Units Streptodornase.

Administration: VARIDASE Buccal Tablets should be retained in the buccal pouch until dissolved. For maximum absorption patient should delay swallowing saliva.

Dosage: One tablet four times daily for a minimum of three days. When infection is present, VARIDASE Buccal Tablets should be given in conjunction with an antibiotic such as ACHROMYCIN* V Tetracycline and Citric Acid.

Available in bottles of 24.

*Reg. U. S. Pat. Off.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



DIURIL®
CHLOROTHIAZIDE



GIVES GREATER EFFECTIVENESS TO ANY PROGRAM FOR HYPERTENSION



MERCK SHARP & DOHME
Division of Merck & Co., Inc. • Philadelphia 1, Pa.

RATIONALE

"It appears that there is now available in chlorothiazide a drug which is a specific antagonist to the abnormal sodium metabolism seen in the vast majority of hypertensive patients. The use of this agent [DIURIL] may stand the test of time as the most vital and specific weapon in the treatment of a relatively non-specific disease in which the only specific abnormality known is one of sodium metabolism. . . . Chlorothiazide now appears to be the drug of choice when initiating therapy in the average hypertensive patient."

Reinhardt, D. J.:
Delaware State Med. J. 30:1, January 1958.

RESULTS

"We have presented a group of 48 patients previously treated with a variety of antihypertensive agents." "Upon the addition of chlorothiazide to their regimens, there was realized an additional blood pressure lowering effect of 23 mm. systolic and 11 mm. diastolic."

Bunn, W. H., Jr.:
Ohio State Med. J. 54:1168, September 1958.

MINIMAL SIDE EFFECTS

"There is an extremely wide range between therapeutic and toxic dosage, and no significant side effects and no sensitivity to the drug as yet have been observed."
". . . it seems desirable to add potassium chloride 4 Gm. per day . . . in cases of hypertension. . . ."

Herrmann, G. R., Hejtmancik, M. R., Graham, R. N. and Marburger, R. C.:
Texas State J. Med. 54:639, September 1958.

dosage: one 250 mg. tablet DIURIL b.i.d. to one 500 mg. tablet DIURIL t.i.d.

supplied: 250 mg. and 500 mg. scored tablets DIURIL (Chlorothiazide) bottles of 100 and 1000.

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CHLOTRIDE, CLOTRIDE, SALURIC.

Exactly how does new Halodrin* restore the "premenopausal prime" in postmenopausal women?

Webster defines "prime" as the period of greatest health, strength, and beauty. In a woman, these are the childbearing years between puberty and menopause—the years when her hormone production is highest.

The inevitable reduction in this hormone production as she enters the menopause often results in physical discomfort in the form of hot flushes, nervousness, insomnia, or a multiplicity of other symptoms with which you are familiar. Superimposed on this physical picture is the psychic trauma brought on by this unavoidable evidence of aging. The thing that brings her to a physician is simply that she "feels bad."

You can't make her 35 again—but the odds are good that you can make her feel like it! The secret is a combination of reassurance and hormones. The exact form and amount of the former defy objective analysis, but the latter can now be provided with scientific precision. Reduced to essentials, here is the explanation of exactly how hormones—in the form of Upjohn's new Halodrin—restore the "premenopausal prime."

The normal premenopausal woman excretes estrogens in the urine in the form of estradiol, estrone, and estriol, in an approximate 28-day average ratio of 39:15:46. Starting with this urinary excretion of estrogens, it is possible to calculate backwards and estimate the amount of estradiol that must have been secreted endogenously in order to produce these urinary levels. This is possible because the proportion of estrogens which appears in the urine following parenteral administration has been established in castrated women.

On this basis, the average endogenous output of estrogens is about 160 micrograms per day during a menstrual cycle, and 80 micrograms per day in postmenopausal women (see chart opposite). Therefore, the restoration of the "premenopausal prime" in the postmenopausal woman requires the replacement of approximately the equivalent of the 80 micrograms of estradiol per day that she no longer secretes endogenously.

Oral ethinyl estradiol is about 2 to 2½ times as potent as parenteral estradiol. Therefore, the replacement of 80 micrograms of endogenous estradiol production per day is accomplished by the oral administration of 32 to 40 micrograms of ethinyl estradiol per day.

Each Halodrin tablet contains 20 micrograms of ethinyl estradiol, which means that the recommended dosage of 2 tablets per day provides 40 micrograms of ethinyl estradiol. This offsets the loss of 80 micrograms of endogenous estradiol production in the menopausal woman; i.e., restores the "premenopausal prime."

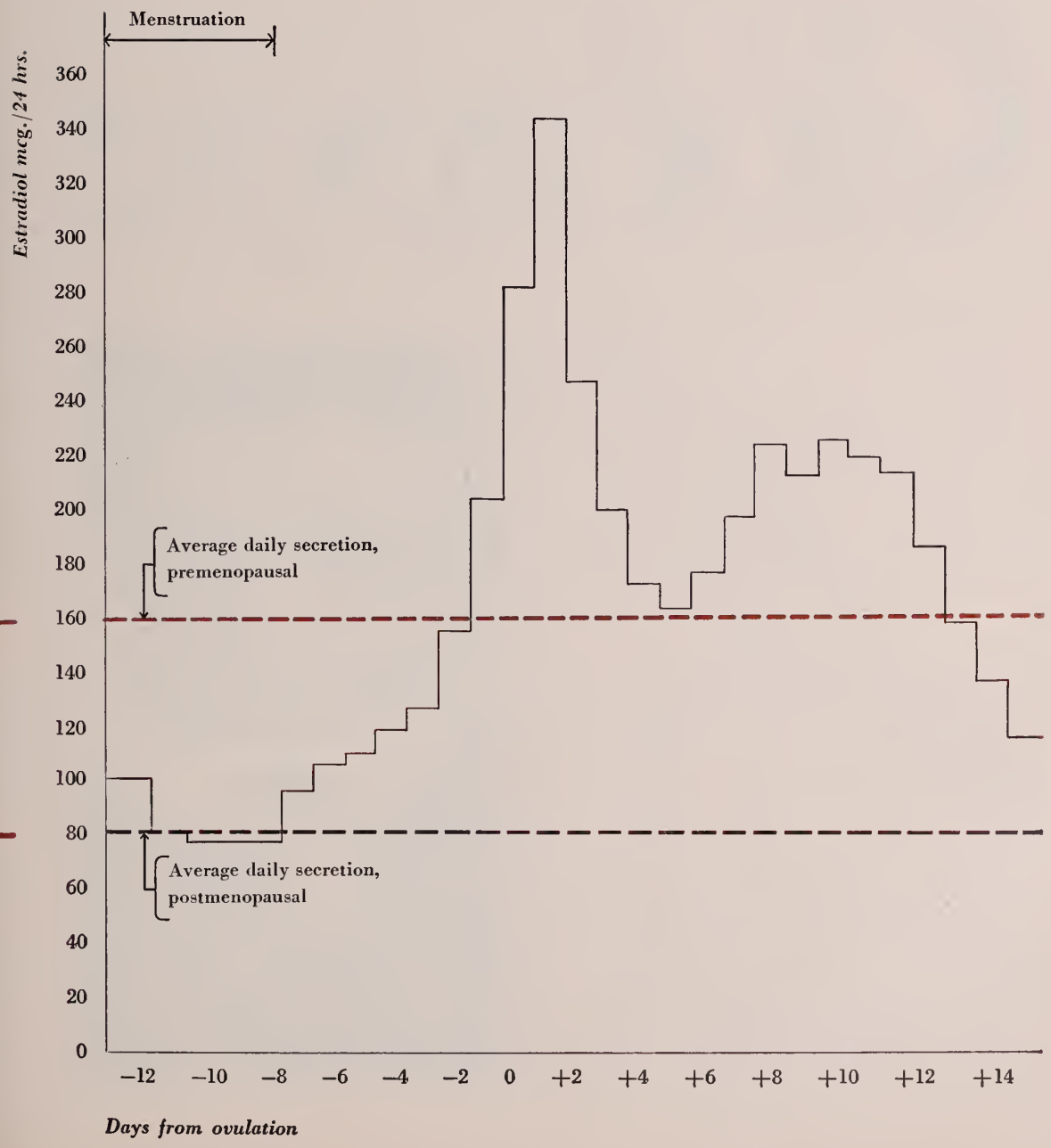
Each Halodrin tablet also contains 1 mg. of Upjohn-developed Halotestin* (fluoxymesterone)—the most potent oral androgen known. The primary purpose is to "buffer" the ethinyl estradiol just enough to prevent breakthrough bleeding, which is obviously undesirable in the menopause. It also exerts other beneficial hormonal effects, one of which, in common with ethinyl estradiol, is a powerful anabolic action so desirable in patients of advanced years.

Upjohn

*TRADEMARK, REG. U.S. PAT. OFF.

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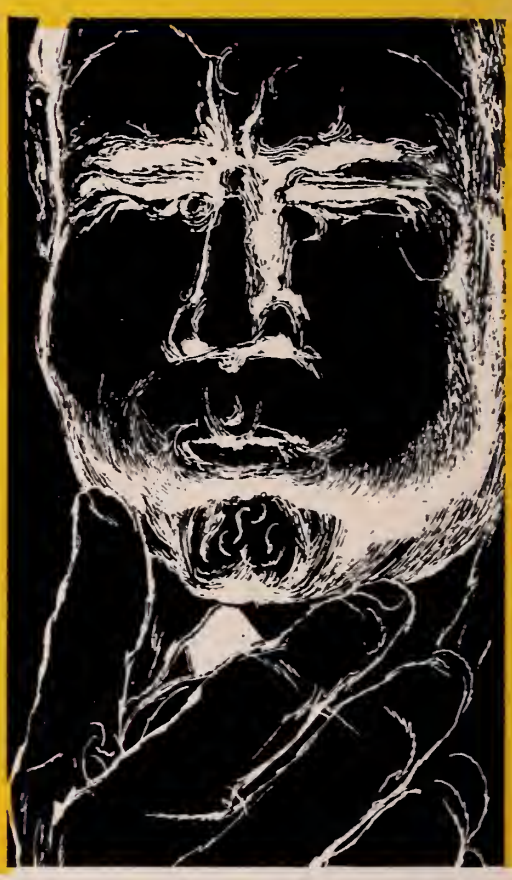
Endogenous estrogen secretion (mcg./24 hours)
(calculated from average 24-hour urinary excretion
of estradiol, estrone, and estriol)



the higher
blood levels of
potassium
penicillin V

Compoc

FOR
THOSE
COMMON
BACTERIAL
PROBLEMS



902069

IN FILMTAB® / IN ORAL SOLUTION
AND IN COMBINATION WITH SULFAS

illin®-VK

(POTASSIUM PENICILLIN V)

INDICATIONS

Against all penicillin-sensitive organisms. When combined with Sulfas, COMPOCILLIN-VK is especially effective in treating mixed infections such as may occur in the respiratory or urinary tract.

DOSAGE

Range is from 125 mg. (200,000 units) three times daily to 250 mg. (400,000 units) every four hours. Children's dosage is determined by body weight. When combined with sulfa triad, range is one Filmtab three times daily to two Filmtabs every four hours.

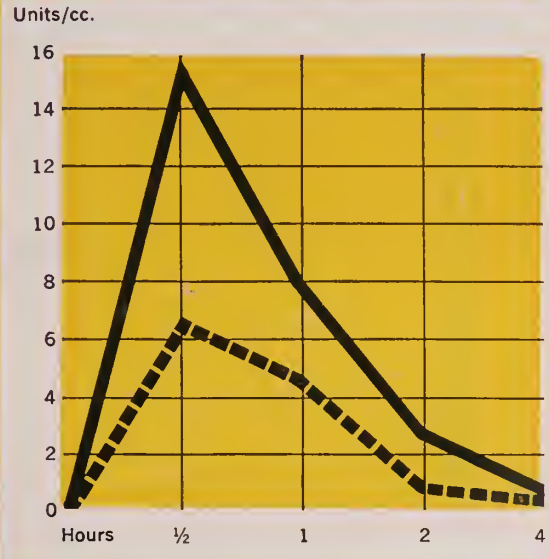
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1. Editorial: New England J. Med. 258:48, 1958.
2. Vinnicombe, J.: Antibiotic Med. & Clin. Ther. 5:474, 1958.
3. Sheth, U. K., et al.: Ibid., p. 604, 1958.

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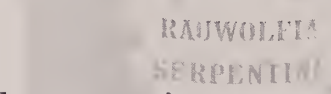
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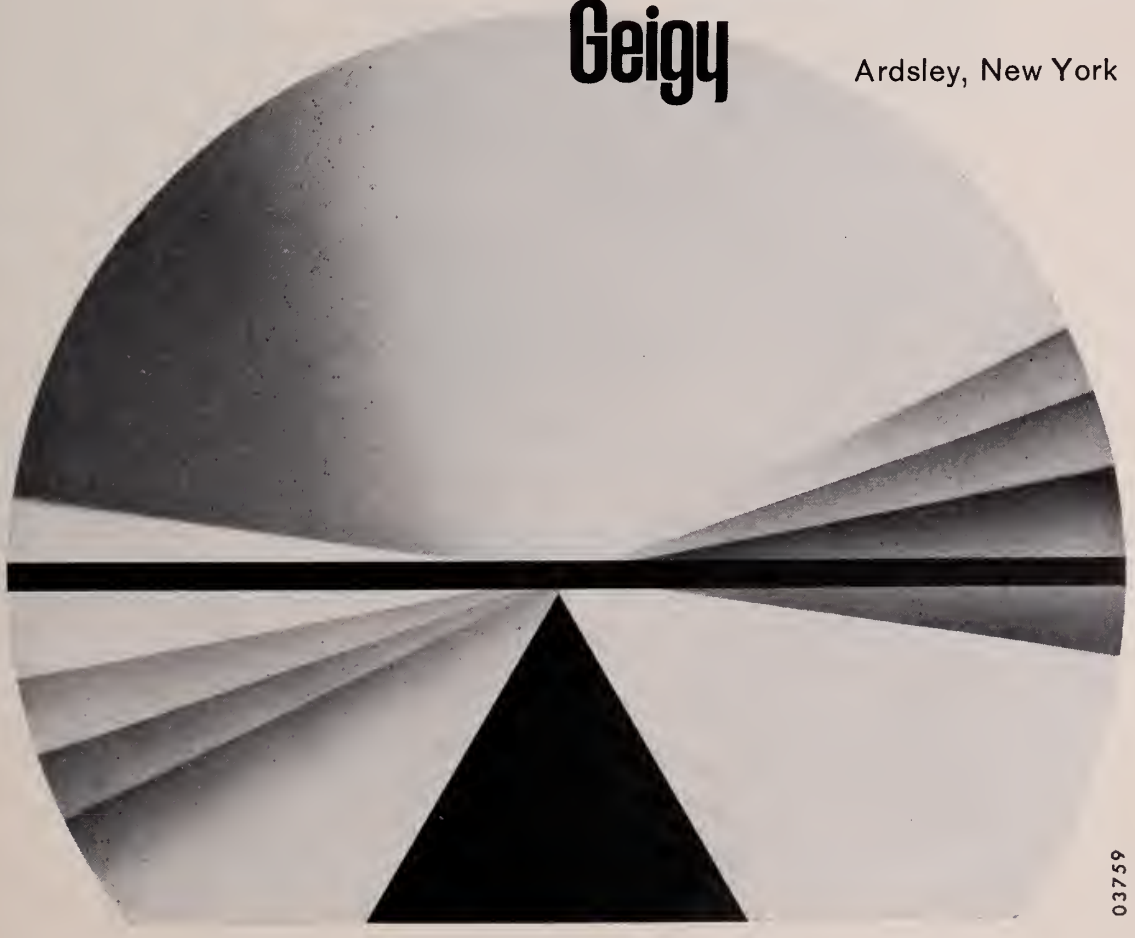
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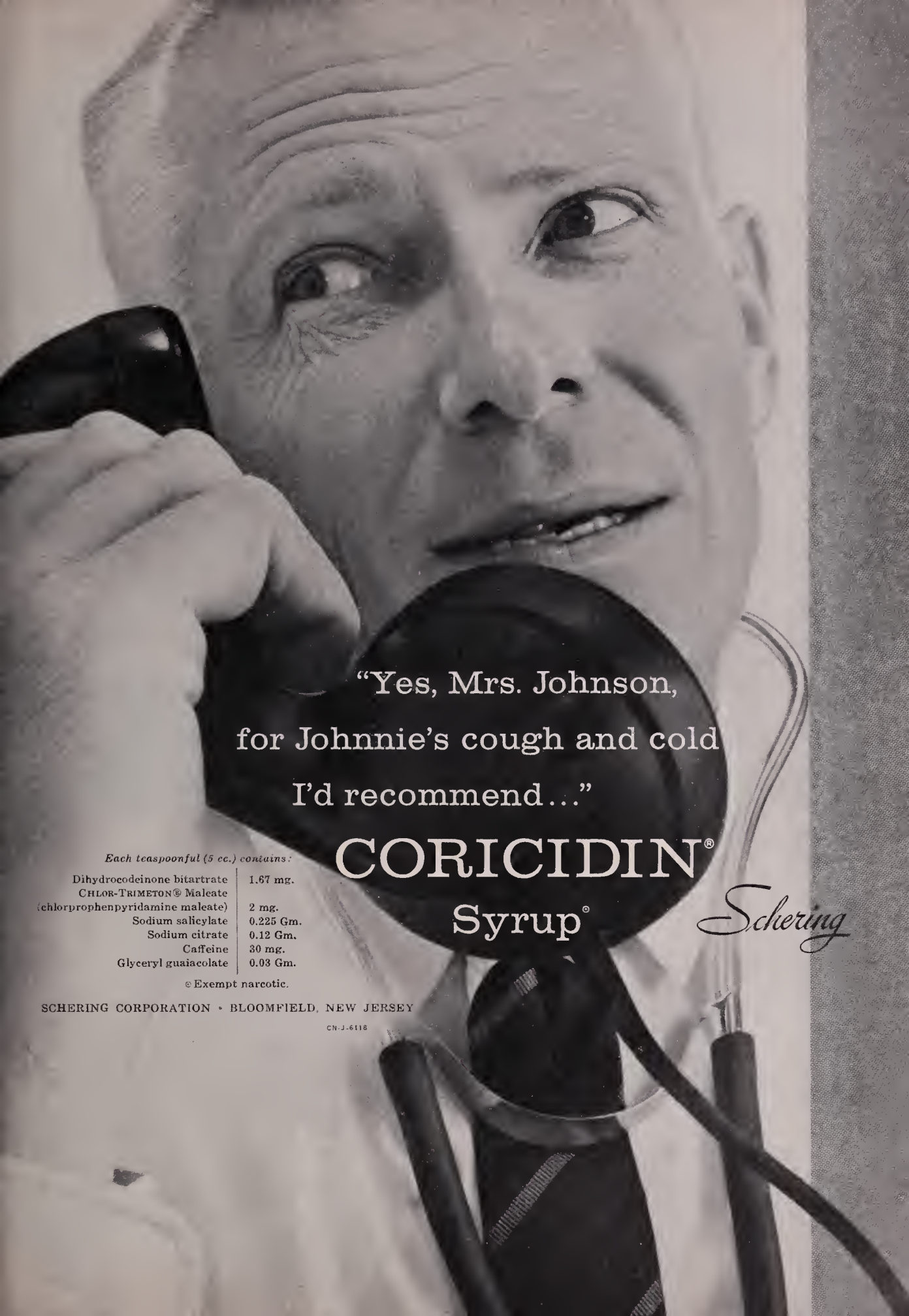
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Guest Editorial....

It's Costing You!

YOUR DULY ELECTED REPRESENTATIVES in Congress passed a law in 1954 which vitally affects you. Public Law #761 provides insurance benefits to the disabled. During the first six months this law was in effect (July-December 1957) $72,406,000.00 was paid to disabled citizens. Some indication of the rapid growth of the program can be learned from the fact that in the month of October, 1958, payments were made at a yearly rate of $312,000,000.00.

Much opposition on the part of physicians stems from a lack of knowledge and appreciation of P.L. #761, its criteria of disability, the mechanics of administration and the implied trend towards further expansion in the direction of total care and broadening of the age limits of eligibility for payments.

At the risk of over-simplification, P.L. #761 may be said to provide payment to certain wage earners with adequate evidence of a disability, as set forth in the standards provided by the Law. Much misunderstanding on the part of doctors arises from a failure to appreciate that the various standards of disability, such as in the Veterans Administration, industry, social agencies and insurance companies, etc., are different in scope and are in no way related to the standards set forth by P.L. #761. The fact that an individual is considered totally disabled by Veterans Administration standards does not insure he will necessarily meet the standards provided by P.L. #761.

What does P.L. #761 accept as evidence of disability? There are four factors in the definition. First, the disability must be "medically determinable" (i.e., the disability can be objectively determined by medical examination or tests). Second, the disability must be the primary cause of the individual's inability to work. Third, the inability to work refers to any substantial work, not necessarily the kind of work the applicant was last engaged in, or the kind of work for which he is most obviously suited. Four, the disability must result from a condition which at the time of application can be reasonably expected to continue for an indefinite time. In the words of the Law, it must be of "long-continued and indefinite duration".

Doctors objections include: (1) Failure on the part of the government to compensate them for filling out forms; (2) Receiving requests for additional information; (3) Feeling that their judgment is being challenged when requests are received for additional and more complete clinical description and diagnostic tests of the disabling condition. In seeking additional information, the medical judgment of the physician is not being questioned, but certain clinical findings which are highly significant to the evaluation of functional capacity are being sought in order that the standards of the law might be complied with.

Many doctors, in lieu of complete reports, write something to the effect, "I've known this patient for thirty years and he is totally disabled." This statement may be true, but the law states that a realistic evaluation of disability must be based on objective clinical and laboratory tests of the individual's ability to meet the metabolic demands of activity, to cerebrate, to perceive and to perform certain basic activities such as sitting, standing, bending and walking.

Doctors, mindful of the fact that they themselves are taxpayers, should be aware that their considered and unbiased medical findings in these cases are as important to indicate those persons who should not receive cash benefits as to point out those who do qualify.

Every wage earner (except physicians) in the United States, who meets the eligibility requirements of the program, may be a potential candidate for cash benefits when totally disabled.

Where is this trend leading? Prior to August, 1958, individuals could not draw pensions from two or more governmental agencies at the same time. With the passage of the August 1958 amendment to the Social Security Act, payments may now be received from multiple governmental sources at the same time for the same disability.

Since the Social Security Act was amended in 1954, there have been two additional amendments (1956 and 1958) increasing the number of persons receiving benefits. In 1956 the age limits for payments for disability were lowered from age 65 to 50 for immediate cash payments. Further lowering of age limits may be in the offing. This broadening and extension of the plan may well have the effect of jeopardizing the fine work done by the Rehabilitation Centers. As it becomes easier to obtain financial help, many disabled persons will lose their motivation for rehabilitation.

How can you as a physician help? (1) By accepting the fact that the law was duly passed by the Congress elected by the people and demonstrate a willingness to record scientific data (objective evidence is desired, not opinions). (2) The problem of evaluating disability would be less difficult if more practical and precise techniques for measuring body function could be developed. This is a problem for basic research. (3) Work toward informing your Congressman of the limitless dangers of a "welfare state", the effect on the motivation and rehabilitation potential of the disabled citizen, should this program continue to expand at the same rate it has in the past four years. Those disgruntled applicants who may have paid into Social Security from their earnings since 1937 may feel entitled to benefits even when their disability is minor or partial or when they become unemployed due to exigencies not connected with their state of health.

These unhappy individuals fail to recognize that the Social Security Act in itself was intended to "insure" the worker against total and permanent disability. The medical determination of disability, with a complete and objective medical history, full description of the residual impairment to body function, treatment and results of treatment, rests with the well qualified physician.

The proper administration of the Social Security Act depends on the full cooperation of an informed medical profession!

Sidney G. Page, Jr., M.D.

Editor's Note: Dr. Page is associate in medicine and lecturer in pharmacology at the Medical College of Virginia.

The Sulfonamides

Twenty-five Years Later

WILLIAM H. HARRIS, Jr., M.D.
Richmond, Virginia

TWENTY-FIVE YEARS AGO the first successful clinical application of a sulfonamide drug was announced to the world.[1] A German physician whose name was Foerster presented a paper before the Düsseldorf Dermatological Society at its monthly meeting on May 17, 1933, entitled "Sepsis im Anschluss an Ausgedehnte Periporitis. Heiling durch Streptozon." In this report Foerster discussed the case of a ten month old child suffering from an overwhelming staphylococcal bacteremia secondary to extensive cellulitis who was cured by a new chemotherapeutic agent eventually to become known as "Prontosil". Although the original investigative work was done by Gerhard Domagk during Christmas week of 1932 his results were not published until February 1935. Domagk stated that "prontosil, a relatively non-toxic red dye when given by mouth in small doses, prevented the evolution of otherwise fatal hemolytic streptococcal infections in mice, controlled and cured chronic streptococcal infections in rabbits, and favorably influenced the course of staphylococcal infections in rabbits, but was without effect in the treatment of certain pneumococcal and other experimental infections."

Any discussion of sulfonamides would be incomplete without reference to the work of Drs. Perrin H. Long and Eleanor A. Bliss who carried out much of the early experimental and clinical investigation at the Johns Hopkins Hospital. Their monograph,[1] published in 1939 and titled "The Clinical Use of Sulfanilamide and Sulfapyridine and Allied Compounds", was an authoritative compilation of existing knowledge. In the preface dated February 14, 1939, they wrote: "Six years have passed since Foerster reported upon the use of Prontosil in the treatment of a child ill with staphylococcal sepsis. In the intervening period we have witnessed the conquering of streptococcal, meningococcal, gonococcal, pneumococcal and many other types of infections by means of chemotherapy, and we have seen the development and clinical application of numbers of new sulfonamide-containing drugs. While the period has been brief, it has been called 'epochal' in the history of medicine."

Difficulties were encountered in administering the early sulfonamides and serious toxic reactions were frequent. As soon as penicillin became generally available the sulfonamide drugs were used less often. The practicing physician felt that he would now be spared the many problems associated with their usage. The great new miracle drug, penicillin, appeared virtually harmless. During the ensuing decade many other antibiotics became available. Infections caused by practically all the pathogenic bacteria, as well as rickettsia, spirochetes, and certain large viruses now seemed under control so that few if any problems remained.

As time passed certain untoward reactions, some serious, began to be observed. At the meeting of this society in 1953 I presented a paper[2] entitled "Clinical Problems Created by Antibiotic Therapy" in which a number of these disturbances were discussed. In view of such developments it would seem appropriate in this twenty-fifth anniversary year to review and reevaluate the sulfonamides.

The most effective single sulfonamides have been, and still are, the sulfapyrimidines: sulfadiazine and sulfamerazine. Domagk[3] is of the opinion that these two drugs lost favor because they were prescribed in excessive amounts resulting in toxic complications, chiefly renal, which caused them to be replaced by less effective preparations. A daily dosage of 3 to 5 gm. produces the same clinical results that can be attained with twice this amount of other sulfonamide drugs, and without side reactions. Sulfadiazine is well tolerated, diffuses readily into the body fluids, including the cerebrospinal fluid, and is promptly excreted by the kidneys. The oral and parenteral forms of sulfadiazine provide convenient methods for its administration. Large doses of oral sulfadiazine and intravenous sodium sulfadiazine may produce renal tubular damage due to crystallization of the acetylated form in acid urine. Therefore, alkalinization of the urine and maintenance of a high urine output are essential to prevent such complications when excessive amounts are prescribed.

Presented at the Annual Meeting of The Medical Society of Virginia, October 12-14, 1958, in Richmond.

Most of the serious reactions to sulfonamides were eliminated when sulfadiazine became available. However, renal tubular irritation continued to occur in a small percentage of patients. In recent years, several different types of compounds have been introduced in an effort to reduce this hazard. One approach has been to combine sulfonamides,[4,5,6] usually three, in equal amounts, and utilize as a single preparation. It was found that the concentration of each drug in the urine is independent of the other whereas the total antimicrobic effect is additive. Serum concentration of the individual sulfonamide is maintained below 5 mg. per cent which has been demonstrated to be the critical level above which sensitization and other toxic manifestations develop. A number of combinations are available to the practicing physician, most of them containing equal quantities of sulfadiazine, sulfamerazine, and sulfamethazine. Sulfacetamide (Sulamyd) and sulfathiazole have been used instead of sulfamethazine in some preparations, but there is a trend to discontinue the use of sulfathiazole entirely because of its high toxic potential. Sulfadimetine (Elkosin), which is highly soluble, lowly acetylated, and rapidly excreted, has replaced sulfamethazine in some products. Mixtures are available for oral administration only. A recent article[6] in the Medical Clinics of North America lists 29 triple sulfonamide mixtures which have been released by 21 pharmaceutical companies.

Another type of compound which has been widely used, especially in the treatment of urinary tract infections, is the highly soluble (in urine) single sulfonamide.[6,7] The first of this group, sulfisoxazole (Ganstrisin), was introduced in 1946 although synthesized four years earlier. At pH_6 its solubility is approximately 320 mg. per cent as compared to 25 mg. per cent for sulfadiazine. Crystals are occasionally seen in the urine but hematuria is very infrequent. Other soluble sulfonamides presently available include sulfadimetine (Elkosin), sulfamethylthiadiazole (Thiosulfil), sulfaethylthiadiazole (Sulfaethidole) and sulfacetamide (Sulamyd). Ganstrisin is the only one of this group which can be given by injection. Reports in the literature regarding the relative merits of the single soluble sulfonamides as compared to mixtures have been conflicting, but on the whole they seem to be equally effective where equivalent concentrations of the free drug are maintained in the tissues. Toxic disturbances are infrequent and occur in a very small percentage of patients.

During the past few years extensive use has been made of the soluble sulfonamides at one of the large teaching hospitals in Texas.[7] It is estimated that approximately 500,000 gm. are administered annually. Despite this enormous quantity of drug there have been no cases of toxic renal complications or of hematological disorders such as agranulocytosis or aplastic anemia for which sulfonamides have been responsible in the past. From available evidence it appears quite definite that toxicity to the recently developed sulfonamides is less frequent than that encountered with the antibiotics. At this same Texas institution there were more severe drug reactions requiring hospitalization as a result of penicillin therapy than were caused by the administration of sulfonamide drugs.

There is a modern trend to prolong the action of drugs especially those administered by injection. This principle is being applied to oral sulfonamide medication utilizing the mechanisms of delayed excretion and slow absorption.

An example of the former is sulfamethoxypyridazine,[3,6,8,9,10] a drug made available recently, which has been given the trade designation of Kynex or Midicel. Investigation indicates that it is rapidly absorbed from the gastrointestinal tract, diffuses well into the spinal fluid, and is slowly excreted by the kidneys. After a single 2 gm. oral dose the drug has been detected in the blood stream for as long as seven days. Prolonged therapeutic plasma levels are thus possible on a unique dosage schedule which permits administration of the drug at twelve to twenty-four hour intervals. Experimental studies have revealed an antibacterial spectrum comparable to that of sulfadiazine. Clinical reports indicate effectiveness in a wide variety of bacterial infections. Favorable results have been reported in the treatment of acute and chronic urinary tract infections, acute infections of the upper and lower respiratory tract, and middle ear. Meningococcus meningitis has been successfully treated in two patients. One patient with proteus lung abscesses was cured. The chief toxic manifestation has been a mild dermatitis with or without fever which has subsided promptly after the drug was discontinued. Headache and general malaise may occur but in no instance has crystalluria, leukopenia, or any other serious complication been observed. Further use of this drug to determine its true value for short or long-term prophylaxis and for treatment of sulfonamide susceptible infections would appear to be indicated.

A so-called "sustained release" preparation is available under the trade name of Sul-Spansion.[6,11,12] The basic sulfonamide is sulfaethylthiadiazole[13]

which was originally isolated by a group of German scientists in 1940. This drug is said to be absorbed continuously over an eight to ten hour interval producing thereby a prolonged even concentration in the blood. It is administered orally, diffuses readily from the gastrointestinal tract and is very soluble in urine over a wide range of pH. Between 90 and 95 per cent of the total blood and urine sulfonamide exists in the free form. Adequate plasma levels are maintained by a dose administered every twelve hours. Growth inhibition of both gram negative and gram positive pathogens has been noted and clinical results in respiratory and urinary tract infections, especially in children, have been uniformly good. Dougan[12] has recently reported his experience in treating 45 private pediatric patients ill with acute and chronic infections due to a variety of bacterial organisms. All but two of his patients responded favorably. He observed no toxic reactions.

The incidence of side-effects is said to be lower than with other sulfonamides. Serious hematological disturbances such as granulocytopenia and hemolytic anemia have not been reported.

It was found by certain workers in 1939 that a suspension of sulfonamides in olive oil resulted in enhancement of therapeutic effect and high blood levels when given orally to mice.[3] Extension of these studies to humans in 1955 demonstrated satisfactory blood levels of free sulfonamide following a twice-daily dosage of an oral preparation in a lipid emulsion. These investigations formed the basis for the recently introduced lipid emulsion[6] of sulfadiazine, triple sulfonamides, and sulfisoxazole. When administered on a twelve hour schedule effective levels are produced within the first two hours and continue for an eight hour period. Reasonable palatability and low toxic potential are the favorable features of these compounds.

Any discussion of sulfonamide drugs would be incomplete without a word about the topically acting preparations.[14,15] Sulfasuxidine, Sulfathalidine, and Thalamyd are effective in treating bacterial infections of the intestine including bacillary dysentery. They are also valuable in preoperative preparation of the bowel. Sulfamylon, which is not inhibited by pus, has been effective in a 5 per cent solution when applied to the mucous membrane in upper respiratory infections and certain pyodermas.

The sulfonamides act primarily as bacteriostatic agents.[16] Antibiotics, penicillin in particular, are bactericidal to susceptible organisms in the test tube and may be to some extent in the animal body. Recovery from infection in the human host is probably never due solely to the bactericidal action of drugs. There is ample evidence, both clinical and experimental, that the destruction of a significant proportion of invading bacteria depends upon combined action of the antimicrobic agent and the natural defenses of the host. Rarely, if ever, is a bactericidal effect necessary for control of the majority of bacterial infections which are treated in the home and office. Such activity on the part of the antibacterial agent is not often required even in the hospitalized patient. Suppression of bacterial multiplication by adequate amounts of a sulfonamide drug will influence favorably the course of most susceptible infections.

The great majority of the less severe acute infections which are seen in practice today involve either the respiratory passages, the gastrointestinal, or the urinary tracts.[7] The estimate has been made that from 70 to 90 per cent of uncomplicated urinary tract infections are responsive to these drugs. It seems logical to prescribe less powerful drugs such as the sulfonamides when treating mild infections because these agents are effective and by their usage we delay the development of antibiotic resistant strains. In so doing we reserve our most potent weapon, the antibiotic, for more serious infectious processes.

The several diseases[3,15] for which the sulfonamide compounds continue to be first choice are meningococcal infections (treatment and prophylaxis), uncomplicated urinary tract infections particularly those caused by organisms of the coliform group, bacillary dysentery, cholera, trachoma, chancroid, and dermatitis herpetiformis. Respiratory pathogens such as pneumococci, streptococci, influenza bacilli, and Klebsiella pneumoniae are sensitive in many instances. Occasionally the sulfonamides will successfully eradicate infections which are or have become antibiotic resistant especially those due to staphylococci and certain gram negative bacilli such as proteus, pseudomonas, and salmonella. They can be used prophylactically in patients requiring indwelling catheters and in preparation of the bowel for surgery.

Sulfonamides effectively control hemolytic streptococcal infections and their immediate suppurative complications, but are not as satisfactory as penicillin in preventing the later development of rheumatic fever and glomerulonephritis. Long term prophylactic sulfonamide therapy has been successful in preventing recurrences of rheumatic fever.

Combinations[3,15] of an antibiotic and a sulfonamide are not recommended as routine practice but may be advantageous in the management of certain acute purulent meningitides, actinomycosis, and mixed infections involving the respiratory tract or complicating burns and traumatized tissues. However, it should be emphasized that there are few infections in which the administration of more than one agent is justified, and certainly not in the simple benign infectious processes with which we are frequently confronted.

Although antibiotics have supplanted sulfonamides in the treatment of many infections these drugs remain valuable therapeutic tools. Their usage is economical because they can be manufactured in quantity at low cost. More than 5,000 sulfonamide compounds[15] have been synthesized but only a very few are really necessary in clinical practice. The most favorable results are obtained by the proper adjustment of dosage in each case. A free sulfonamide concentration of 10 to 15 mg. per cent in severe infections and 5 to 10 mg. per cent in moderately severe infections has been found to be adequate.[3]

Systemically-acting sulfonamides are promptly absorbed by the intestine and diffuse freely into body fluids. Since they exit via the urinary tract, good renal function is essential to prevent dangerously high blood and tissue levels. When prescribed sensibly sulfonamides carry no greater risk than any other effective antimicrobic drug.

SUMMARY

A quarter century after their introduction the sulfonamides remain effective, inexpensive antimicrobic agents. In this paper the compounds presently available are discussed and their clinical indications reviewed. It is emphasized that constant maintenance of adequate blood levels of free sulfonamide is necessary for successful therapy and to prevent the development of bacterial resistance. Serious reactions have been almost completely eliminated by the development of less toxic compounds. Concurrent administration of sulfonamides and antibiotics should not be routine but reserved for certain specific situations.

ADDENDUM

Since this paper was written a new long acting sulfonamide has been released. This drug, sulfadimethoxine, has been given the trade name "Madribon". Preliminary studies[17] indicate prompt absorption, slow excretion, and low toxic potential. After an initial loading dose administration of the compound once every twenty-four hours is considered to be adequate for control of infections caused by sensitive bacteria. Successful treatment of respiratory, urinary tract and gastrointestinal infections of varied bacterial etiology in adults and children has been reported.[18,19]

Bibliography

1. Long, P. H., and Bliss, E. A.: Clinical Use of Sulfanilamide and Sulfapyridine and Allied Compounds. The Macmillan Company, New York, 1939.
2. Harris, William H., Jr.: Clinical Problems Created by Antibiotic Therapy. Virginia M. Monthly 81: 63 (Feb.) 1954.
3. Proceedings of Second Conference on Sulfonamides. Ann. New York Acad. Sc. 67: 377-524 (Oct.) 1957.
4. Lehr, David: Sulfonamide Mixture Therapy. Presented at the Scientific Exhibit, American Medical Association, Atlantic City Session, (June 6-10) 1949.
5. Lehr, David: Sulfonamide Mixtures. J.A.M.A. 139: 398, 1949.
6. Terrell, W., Yow, E. M., Daeschner, W.: The Newer Sulfonamides. M. Clin. North America (March) 1957, p. 539.
7. Yow, E. M.: A Reevaluation of Sulfonamide Therapy. Ann. Int. Med. 43: 323 (Aug.) 1955.
8. Boger, W. P., Strickland, C. S., and Gylfe, J. M.: Sulfamethoxypyridazine (Kynex) A New Long-Acting Sulfonamide. Antibiotic Med. and Clin. Ther. III: 378 (Nov.) 1956.
9. Grieble, H. G. and Jackson, G. S.: Prolonged Treatment of Urinary Tract Infections with Sulfamethoxypyridazine. New England J. Med. 258: 1 (Jan. 2) 1958.
10. Weihl, C.: Sulfamethoxypyridazine: A New Sulfonamide for Pediatric Out-Patients. Antibiotic Med. and Clin. Ther. 5: 173 (March) 1958.
11. Bishoff, R. J.: The Use of a New Sustained-Release Antibacterial Agent in General Practice. Antibiotic Med. and Clin. Ther. III: 399 (Nov.) 1956.
12. Dougan, H. T.: The Use of a New Sustained Release Liquid Antibacterial Agent in Pediatrics. Virginia M. Monthly 85: 15 (Jan.) 1958.
13. Council on Drugs: Sulfaethidole. J.A.M.A. 167: 1937 (Aug. 16) 1958.
14. Goodman, Louis S., and Gilman, Alfred: The Pharmacological Basis of Therapeutics. 2nd Ed. pp. 1276-1320. The Macmillan Company, New York, 1955.
15. Current Concepts in Therapy: Sulfonamides. New England J. Med. 255: 290 (Aug. 9) 1956.
16. Wood, W. Barry, Jr.: Defense Mechanisms of the Host in Relation to Chemotherapy of Acute Bacterial Infections. Evaluation of Chemotherapeutic Agents, p. 81. Columbia University Press, New York. 1949.

17. Boger, William P.: A New Long-Acting Antibacterial Sulfonamide, 4-Sulfanilamido-2, 6-Dimethoxypyrimidine, "Madribon": A Comparative Study*.

18. Ross, Sydney: The Use of the Long-Acting Sulfonamides in Children*.

19. Townsend, Edward H., Jr., and Borgstedt, Agneta: Preliminary Report of Clinical Experience with Sulfadimethoxine, A New Long-Acting Sulfonamide*.

*Papers read at the Sixth Annual Antibiotic Symposium, Washington, D. C., October 15, 1958.

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Giving Medicine to Children

Giving medicine to a stubborn child is like any other "do-it-yourself" home project. A Norfolk pediatrician, Dr. Forrest P. White, listed in the December Today's Health, an American Medical Association publication, some rules and techniques for giving medicine to children.

His general rules are:

—Plan the procedure first. Have all equipment within reach. If two adults are involved, decide what each will do.

—Put the medicine bottle where the child can't knock it over, especially if it is expensive.

—Assume from the first that you are going to succeed. This conviction alone may persuade the child that he may as well cooperate.

—Don't let your child's excitement infect you. Keep calm. If you feel anger, don't show it. Just keep talking to the child calmly and soothingly, even when he's yelling his head off.

—When a liquid medicine is given and the child vomits afterward, wait till he calms down and then repeat it. Usually it will stay down the second time.

Dr. White said that when two parents work together—or gang up from the child's point of view—the father holds the child on his lap and holds the child's wrists, while the mother steadies the child's head and forces his mouth open.

When only one parent gives the medicine, he holds the child on his lap with the child's legs between his knees. The child's left arm is kept behind the parent's back and the parent uses his right hand to hold the child's right elbow so the arm is above the head. The child's head is held against the parent's body and child's upraised right arm.

When forcing medicine, it is often best to give only half a teaspoonful at a time. For the unusually rambunctious youngster, he suggested pouring half a teaspoonful into each of two spoons, putting them on the table, returning the bottle to the shelf and then getting the child.

The spoon should be placed on the tongue and held there, tipping it to pour a small amount at a time onto the back of the tongue. As long as the spoon is held in place, the child can't spit the medicine out and has no choice but to swallow.

Almost any child resisting medicine will open his mouth to cry, allowing the spoon to be inserted. If instead he clamps his mouth shut and the mother needs both hands free, she should wrap the child snugly in a sheet or blanket with his arms against his sides. Then the mother can force the child's mouth open with one hand and insert the spoon with the other.

Nose or eye drops can also be administered with the child wrapped in a blanket or sheet.

The parents, after administering the medicine, should give the child all the love and sympathy he needs.

Treatment of Superficial Fungus Infections

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THERE are no specific remedies or universally effective preparations for the treatment of superficial fungus infection. Professional judgment and dermatological art are the major factors in treatment. There are a multiplicity of drugs and combinations of drugs, claims and approaches, and a variety of procedures and practices. Each therapist has his own favorite group of remedies, and the indications for these vary with the inclination, training, and experience of the therapist.

It is perhaps unnecessary to emphasize that it is important the individual patient be treated, rather than the disease itself. From a wide variety of medications and methods, a program may be established most suited for the clinical type of disease, which will take care of secondary irritation and infection, and which will exercise due regard for staining qualities of medications, their tendency to produce discomfort, and their indications, and contraindications at certain locations.

It is particularly necessary to individualize therapy, due to the fact that the results of unfortunate self-treatment constitute a major therapeutic problem in the management of superficial fungus infections. Indeed their management is often not that of a pure fungus infection, but of a multiple factor dermatitis. Irritation, secondary infection, sensitization and complications without number, are prominent in many patients. It is in this group of cases that it is necessary to go slow when one is in doubt.

Fungus infection of the skin and skin appendages may imitate many skin disorders, and in turn be imitated by them. For this reason, laboratory diagnosis is desirable.[1]

For clinical purposes, classification on a topographic basis is most useful, because similar eruptions may be produced by different organisms, making a mycologic diagnosis largely impractical.

Moreover, treatment must be instituted promptly for the purpose of relieving symptoms and preventing spread, and early diagnosis may not be possible, beyond demonstration of the organisms in scrapings.

Abstracted from addresses given at the annual meeting of The American Acadamy of Dermatology, Chicago, December 9, 1957, and at the Conference on Dermatology and Otolaryngology, The University of Virginia School of Medicine, Charlottesville, Virginia, January 17, 1958.

It is not the purpose of this presentation to discuss terminology, or the laboratory procedures used in the identification of organisms in scrapings and cultures.

TINEA CAPITIS

Cultural confirmation of the diagnosis of tinea capitis is desirable because the treatment approach is often determined by the causative organism.

A preliminary classification is often possible based on the presence or absence of inflammatory reaction. Microsporum canis eruptions are usually characterized by inflammation, and often respond to local treatment, whereas a non-inflammatory process is frequently a sign of the resistant type of Microsporum audouini infection which eventually may require roentgen epilation. Both will fluoresce under the Wood's filtered ultraviolet light.

Occasionally, scalp infections are due to Trichophyton tonsurans. These infections do not fluoresce, are resistant to treatment, and are not limited to children.

There are a number of general measures which are important in treatment. The hair should be clipped short (one fourth to one half inch.) A daily cleansing with soap and water is essential. The child should be permitted to go to school if under treatment and supervision. This is in keeping with the procedure in many leading health departments. The use of caps is virtually useless. The caps constitute a curiosity, and other children will often take the cap off the infected patient's head and apply it to their own. Moreover, the upkeep on the caps, which is the parents responsibility, is often not all that it should be. From a practical point of view, nothing is to be gained by having the patient wear a cap, or to remain away from school.

Microsporum audouini infections are frequently resistant to local treatment, and x-ray epilation is often necessary. Kligman's[2] studies of the natural history of the disease disclose reasons for failure of local treatment. For routine topical therapy in these cases, Salundek® (new) ointment* applied twice daily is satisfactory. The ointment should be rubbed in well both night and morning. Decupryl® liquid† applied twice daily, is useful. Debridement,

through the manual removal of the affected hairs by the use of eyebrow forceps, and wide adhesive tape, is necessary.

Although an occasional case will respond rapidly, many of these eruptions will endure for three to eighteen months or more.

Microsporum canis infections are treated with wet dressings of 0.5 per cent aluminum acetate solution, 1:4,000 potassium permanganate, or 1:4,000 silver nitrate compresses, if kerion is pronounced. Secondary pyogenic infection is usually present and in these cases it is necessary to administer a broad spectrum antibiotic orally.

Penicillin is contraindicated. Manual epilation and debridement is mandatory, and an undeniably difficult procedure in small children who resent the associated discomfort.

Five per cent ammoniated mercury ointment, Salundek ointment, and Verdefam® liquid‡ are useful in both types of infection.

The inflammatory type will often clear up on suitable debridement, wet dressing, broad spectrum antibiotics orally, and topically in ointment form, the fungus infection apparently being taken care of by the inflammatory process and defluvium in the affected areas.

The multiplicity of methods advocated in the treatment of tinea capitis is mute testimony to the unsatisfactory nature of the management of this condition. Dobes[3] has advocated the use of estrogens in males, administering aminotin by injection. A fungicidal ointment is used with this method of treatment. Estrogen therapy is not suitable for use in females because of side effects. Sullivan and Bereston[4] have suggested the use of 5-Chlorosalicylanilide topically. Various methods of freezing the lesions by means of freon, ethyl chloride, or solid carbon dioxide have been advocated.

Corticosteroids orally, covered by a broad spectrum antibiotic has been suggested for the treatment of kerion.

Everything considered, treatment results have improved, but treatment still leaves much to be desired.

TINEA CORPORIS, CRURIS, AND AXILLARIS

The lesions of tinea corporis occur in a wide variety of patterns. The annular, circular lesion with scaling vesicular borders, is the type usually found. Eczematous lesions, usually annular, without central clearing, and plaque-like lesions, the latter frequently due to Trichophyton rubrum, may occur. Kerion formation is frequently seen in Trichophyton verrucosum infections, contracted from cattle.

Conservative treatment in the form of wet dressings and antibiotics orally, should be used for the kerion type of lesion.

Dry, scaling lesions often respond to a keratolytic ointment such as this modified Whitfield's formula, with 5% sulfur added:

Sulfur ppt.	3.0 Gms.
Salicylic acid	1.8 Gms.
Benzoic acid	3.6 Gms.
Aquaphor	
Cold cream aa q sad	60.0 Gms.

Sig: Apply twice daily.

Eczematous lesions often respond very well to the same approach. Those which display inflammatory reaction, often yield favorably to 1% hydrocortisone and 3% Vioform® in a washable ointment base, applied four times daily or oftener.

Carbol fuchsin paint N. F. (Castellani's paint), freshly prepared, is especially useful in the inguinal area and axillas, if applied once or twice daily.

Colorless Castellani's paint, omitting the basic fuchsin, is especially welcomed by the patient since it will not betray him in the locker room or swimming pool.

Common sites for the localization of these infections are the inguinal area and adjacent regions, perineum, and perianal region, as well as the axillas. The common organisms found are Epidermophyton floccosum, Candida albicans, and various species of Trichophyton.

Ointments are poorly tolerated in these regions. A possible exception is the previously described hydrocortisone-vioform ointment. Fatty acid ointments composed of undecylenic, proprionic, or caprylic acids and their salts, alone or in combinations, are usually non-irritating, but are not as effective as older remedies. A shake lotion with 2% resorcin added is usually well tolerated, and may be applied four times daily or oftener.

Wet dressings should be employed in acute cases, followed by a shake lotion, and later on by more aggressive measures, such as Castellani's paint, and the following fungicidal powder:

Sodium thiosulfate	0.6 gms.
Salicylic acid	1.2 gms.
Boric acid	6.0 gms.
Zinc oxide	
Zinc stearate	
Talc aa qs ad	60.0 gms.

Sig: Apply twice daily.

The powder may be used indefinitely as prophylactic treatment.

TINEA PEDIS AND MANUS

Tinea pedis is perhaps the most common form of fungus infection for which treatment is requested. The organisms commonly found are Epidermophyton floccosum, Trichophyton in its various species, and occasionally Candida albicans and species of Microsporum. The lesions may be (1) dry, scaly and hyperkeratotic; (2) intertriginous; or (3) vesiculobullous.

The scaly, hyperkeratotic form is often caused by T. rubrum, a type resistant to treatment.

Vesiculobullous tinea pedis commonly found on the sole, is usually seen in those who are highly sensitive to the infecting organism. Vesicular and bullous lesions often become secondarily infected with pyogenic organisms, with resultant cellulitis, lymphangitis and lymphadenitis, and frequently display various forms of distant autosensitization reactions.

Intertriginous lesions are characterized by maceration, fissuring, and scaling between the toes, especially between the fourth and fifth. This type of eruption is usually worse during warm weather.

The dry keratotic lesions are often responsive to the previously described Whitfield's ointment formula, with 5% sulfur added. Castellani's paint is time honored and effective. Fatty acid ointments may be used, but are not as successful as some of the conventional, older remedies. A saturated solution of salicylic acid in 70% alcohol is useful for painting dry, scaling, foot eruptions. It may be applied once or twice weekly and should not be prescribed for patients for their personal use.

Verdefam, or Triacetin¶ may be tried in the treatment of Trichophyton rubrum infections.

The acute vesiculobullous lesions, or those of large denuded and irritated areas, are best managed by bed rest and elevation of the affected part, together with compresses of 1:4000 potassium permanganate, 1:2000 silver nitrate, or 0.5% aluminum acetate. Overnight compressing is especially helpful. The importance of debridement cannot be overestimated. This consists in clipping off the top of the vesicles, and removing crusts. Broad-spectrum antibiotics orally are imperative in most of these cases in which secondary cellulitis and lymphangitis are usually encountered. They are also useful prophylactically in order to prevent infection of large denuded areas. Penicillin is contraindicated.

As the acute process subsides, 3% vioform in a washable ointment base, or Sterosan® ointment# (chlorquinaldol) may be used. The previously described fungicidal powder can be used when activity has diminished, and the patient should be instructed to continue this on a more or less permanent basis in an attempt to prevent recurrences. In those who have hyperhidrosis, the oral administration of anticholinergic drugs may be helpful.

Fungus infections of the hands are treated very much like those of the feet. Dry, scaly lesions, or vesicular and bullous lesions with secondary pyoderma, are largely seen here.

The Whitfield's type ointment with 5% sulfur added, often works well for the former, and compressing, antibiotics orally, with hydrocortisone-vioform cream topically is often the best approach, in the latter.

The dry, scaly type is often due to Trichophyton rubrum, and is resistant to treatment. Verdefam or Triacetin may be tried.

Trichophyton verrucosum infections occuring in individuals who are exposed to infected cattle, may occur on the hands as solitary or multiple, discrete lesions. These often yield to x-ray therapy, iodides orally, ammoniated mercury ointment, crude coal tar ointment, or the Whitfield ointment formula. Compressing, debridement, and local epilation with forceps are all necessary.

ONYCHOMYCOSIS

Fungus infections of the nails are frequently resistant to treatment. The invading organisms are usually Trichophyton rubrum or mentagrophytes. Occasionally other organisms are found.

A number of approaches have been suggested for this disorder. Satisfactory results are sometimes obtained from fractional x-ray therapy, combined with the application twice daily of the Whitfield's type ointment with added sulfur, and daily debridement with emery boards.

If the patient can be persuaded to follow a treatment regimen for six to eight months, the results are sometimes astonishingly good.

Failures occur with all methods of treatment. Surgical removal of the nail alone is seldom justified, and is ineffective unless followed up with vigorous treatment with a fungicidal ointment.

TINEA BARBAE

Fungus infection of the bearded area is uncommon. It should be suspected when a pustular folliculitis of the bearded area proves resistant to treat-

ment. These infections are usually due to Trichophyton organisms, and it is always wise to obtain cultures.

Management of these eruptions is similar to that of tinea capitis. Fractional x-ray therapy, wet dressings of silver nitrate, or potassium permanganate, manual epilation, debridement, a broad-spectrum antibiotic orally and topically, and the application of the Whitfield's ointment, or 5% ammoniated mercury ointment will usually bring about a favorable result.

TRICHOMYCOSIS AXILLARIS

In this condition, numerous, pigmented deposits caused by Nocardia tenuis, accumulate on the axillary hair.

The best method of taking care of this problem is to shave the affected area.

OTOMYCOSIS

These inflammatory disorders involving the external ear and ear canal, are not fungus infections. Although saprophytic fungi are often cultured from the affected area, pathogenic fungi are almost never recovered.

Many of these cases may be classified as neurodermatitis, seborrheic dermatitis, infectious eczematoid dermatitis, or contact dermatitis.

Fungicides are to be avoided. Wet dressings of 0.5% aluminum acetate solution, with careful drying afterwards, broad-spectrum antibiotics orally, hydrocortisone-antibiotic ointments, or 3% vioform cream, are helpful in this condition. Corticosporin® § drops are also useful. Many cases are assisted by fractional x-ray therapy. Again, debridement is often helpful in these cases.

MONILIASIS

Candida is a true facultative pathogen. The reactions to this organism are often widespread, and almost always secondary to some other insult to the skin or mucous membrane. Poor nutrition and excessive exposure to moisture are frequent background factors.

Infections of the skin in the anogenital area and around the nails usually respond to nystatin administered orally and nystatin ointment applied topically. Whitfield's ointment with 5% sulfur added is useful. The application of a 2% aqueous solution of gentian violet has its supporters, in spite of its unfortunate staining quality. Addition of hydrocortisone and of a broad-spectrum antibiotic to the nystatin ointment often augments the therapeutic effect, when secondary pyoderma, and inflammatory reaction are present. Nystatin in a lotion form may be used in intertriginous areas. Two nystatin tablets of 500,000 units each may be dissolved and added to one ounce of a shake lotion base, such as calamine lotion. Only fresh lotion should be used since the solution begins to lose its potency in twenty-four hours, and usually has to be discarded after one week.

Nystatin, orally, in a dosage of two 500,000 unit tablets, three times daily is necessary in widespread monilial infections.

Oral infections may be treated by means of nystatin suspension, held in the mouth, or nystatin tablets dissolved in the mouth.

TINEA VERSICOLOR

Tinea versicolor is a common disorder due to infection with Malassezia furfur. Patients usually apply for treatment because of the cosmetic fault and not because of the mild local symptoms. It is important to make a laboratory diagnosis, demonstrating the spores and mycelia in direct potassium hydroxide preparations, particularly in those cases where the disease may be confused with vitiligo.

This disorder usually yields to mild exfoliative procedures. The application of vinegar, followed by 5% sodium thiosulfate aqueous solution, applied twice daily, is a time honored remedy. Many patients consider this approach cumbersome, however. Other exfoliating preparations, such as colorless Castellani's paint applied to small areas, or one-half strength Whitfield's ointment, or Fostex® cream, or Selsun® as a detergent once or twice daily may be used. The Whitfield's ointment may be applied at night. The patient bathes, and scrubs the skin with a brush the next morning, and repeats the process daily. It is most important to continue treatment for at least two weeks after the eruption has been brought under control. Recurrences are frequent, indeed usual, and the patient should be instructed to resume the treatment at the appearance of a recurrence.

The treatment of erythrasma is the same as for tinea versicolor.

DERMATOPHYTIDS

The "id" reactions are secondary eruptions, and are spread hematogenously from a primary focus in specifically sensitized individuals. Dermatophytids often manifest themselves as a vesicular eruption on the fingers and hands, but may occur on any part of the body, and may be generalized.

Diagnosis is usually made on clinical grounds, although diagnostic criteria include (1) demonstra-

tion of fungi in a primary focus; (2) absence of fungi in secondary lesions; (3) a positive trichophyton test; (4) disappearance of the "id" reaction when the primary focus is removed.

Treatment is directed mainly to the primary site. Conservatism and caution are necessary if there is much inflammation present. Symptomatic treatment is indicated for the "id" manifestations. Too aggressive treatment to the primary site will also cause an exacerbation of the "id" reaction.

The systemic administration of corticosteroids is helpful in severe generalized "id" eruptions.

Hyposensitization treatment with trichophyton is tricky, rarely necessary, and subject to complications. It is worth a trial in resistant cases.

PROPHYLAXIS

Prophylaxis of fungus infections consists largely in improving environmental factors, and increasing the resistance of the skin. It is seldom possible to obtain a patient's cooperation in following any sort of regimen for a necessary length of time. However, for the occasional case, and for those who have had multiple recurrences, prophylactic measures are worth emphasizing.

Since the feet are perhaps the source of infection for other areas, and are more frequently involved than any other part of the body, preventive measures are more fruitful here than elsewhere.

The feet should be dried carefully after bathing, and the patient should "sandpaper" between the toes with a bath towel after bathing, in order to remove scales from the toes. Well ventilated shoes, such as nylon mesh-top shoes, are worth a trial. In hot weather, many patients find sandals necessary. Lamb's wool may be placed between the toes when there is maceration and fissuring. Dry socks of cotton or wool should be worn. The patient should carefully rinse soap from the skin after bathing, since alkalinity seems to be an unfavorable influence. Clogs should be worn in public places where people customarily go bare-footed.

The fungicidal powder already described, is a serviceable prophylactic application. It may be applied twice daily to the feet, axillas, and inguinal area, or used as a dusting powder for the body.

Rubber gloves, worn for short periods, are of value in the management of hand infections, in those patients exposed to excessive moisture.

Attention to stasis factors, peripheral vascular disease, occupational factors, emotional tension (which increases perspiration), are all important. Climatic factors cannot be controlled, but the patient can be educated to meet the demands of excessive heat and humidity.

It is probably futile to attempt to "sterilize" shoes. It often comforts the patient (since he expects some sort of treatment directed toward the shoes) if he exposes the shoes to intense sunlight for several hours daily for several days. It is believed this will accomplish as much "sterilization" as one can hope for.

It is particularly necessary to explain to the patient with a recurrent fungus infection, that his problem is largely one of environmental factors, particularly heat and moisture, in addition to lack of resistance, or a peculiar susceptibility of his skin to infection with the organism.

In summary, the treatment of superficial fungus infections must be individualized to meet the clinical manifestations of the disorder. The necessary procedures are control of secondary pyogenic infection by broad-spectrum antibiotic therapy, and wet dressings, debridement, topical therapy according to the needs of the local reaction, prevention based upon control of environmental factors, the use of a fungicidal dusting powder, and a ready explanation for the patient's insistant and searching questions.

Bibliography

1. Mitchell, James Herbert: Ringworm of Hands and Feet: Historical Review. J.A.M.A. 146: 541 (June 9) 1951.
2. Kligman, Albert M.: Tinea Capitis: Due to Microsporum audouini and Microsporum canis: II. Dynamics of Host-Parasite Relationship. A.M.A. Arch. Dermat. 71: 313 (March) 1955.
3. Dobes, William L.: Effect of Estrogenic Hormones on Tinea Capitis due to Microsporum audouini. Arch. Dermat. 72: 252 (September) 1955.
4. Sullivan, M., and Bereston, E.: Study of Topical Therapy of Tinea Capitis. J. Invest. Dermat. 19: 175 (September) 1952.

*Salundek ointment (new). A mixture of undecylenic acid, zinc undecylenate, mono and di-chlorosalicylanalide, and salicylamide. Maltbie Laboratories, Division of Wallace & Tiernan Inc.

†Decupryl liquid. A solution of copper undecylenate, undecylenic acid with a wetting agent, aerosol, in a solvent liquid base containing isopropanol and tetrachloroethylene. Crookes Laboratories, Inc.

‡Verdefam liquid. A solution of salicylic acid, fatty acids, and their sodium and copper salts, and sodium dioctylsulfosuccinate. Texas Pharmacal Co., Inc.

¶Triacetin, (glyceryl triacetate). Available in powder, ointment, or spray forms, under the trade name, Enzactin. Ayerst Laboratories, Inc.

#Sterosan ointment. The trade name of Geigy Pharmaceuticals, for chlorquinaldol ointment.

§Corticosporin otic drops. Contains polymyxin B sulfate, neomycin, and hydrocortisone. Burroughs Wellcome & Co., Inc.

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Neoplasms of the Thymus

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TUMORS OF THE THYMUS GLAND are a relatively rare occurrence although several sizeable series have been reported in recent years.[1] These tumors are usually diagnosed or strongly suspected prior to mediastinal exploration because of their location, appearance on x-ray and usual lack of symptomatology. At one time, it was thought that nearly all thymic tumors were associated with myasthenia gravis.[2,3] However, it has been shown that the thymoma, as contrasted with other types of thymic tumors, is primarily associated with this neuromuscular disorder.[4] Myasthenia gravis is a disease as yet incompletely understood. The basic pathophysiology has not been demonstrated, and only the association of the thymoma and myasthenia gravis has been proven. Actually, about 25 to 35 per cent of all thymic tumor patients give a history of myasthenia-like disorders.[4] This means, of course, that the thymoma occurs more frequently than other thymic neoplasms.[1,4] Other mediastinal tumors or cysts, which by themselves are rare, are nonetheless far more frequent than thymic lesions.[5] Neurogenic tumors, lipomas, teratomas and bronchogenic cysts occur more frequently in this general group than do thymic neoplasms.

The term "thymoma" is by itself confusing because of its ambiguity. For a period prior to 1940, most anterior superior mediastinal tumors were called thymomas. Actually, this tumor is well-defined as a slowly growing thymic neoplasm arising from both the epithelial and lymphocytic elements of the thymic parenchyma. These growths have a tremendous variability in size, age of occurrence and prognosis. The cellular nature of these lesions, that is their malignant or benign potential cannot accurately be predicted by the tumor size. In general, however, the larger thymic neoplasms are more often malignant. Distant metastases are rare except in the anaplastic type of thymic lesions, but destruction by local invasion of contiguous structures is common. Symptoms depend on the adjacent mediastinal structures involved. The superior vena cava is often compressed or invaded with subsequent partial vena caval obstruction and increased venous pressure in the head and upper extremities. These patients will have obvious venous collaterals over the arms and upper chest. The neck is often suffused and large, and the patient gives a history of frequent fainting or lightheaded episodes. Venous pressure in these individuals may be elevated to levels reaching 300 to 400 mm. of water. Tracheal or bronchial compression may cause dyspnea, wheezing and paroxysmal coughing episodes. Usually, however, there are relatively few symptoms and the diagnosis of thymic tumor is apt to be made following a routine survey chest film.

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REPORT OF CASES

The ten year experience with thymic tumors at the University of Virginia Hospital is recorded in the accompanying chart (Chart I). Seven cases were diagnosed and underwent exploratory thoracotomy. Five of these, or 71 per cent, were found to be malignant. No cases studied were associated with myasthenia gravis. The largest thymic tumor in this group occurred in a 22-year-old colored male.

T. D. A 22-year-old colored male had a one-month history of shortness of breath, a 30-pound weight loss, difficulty sleeping except in a sitting position and swelling of the arms, neck and face. There had been several episodes of syncope.

Chest x-rays revealed a large mediastinal mass (Fig. 2). Examination revealed a blood pressure of 120/90, pulse 102, respiratory rate of 25. The patient sat leaning forward throughout the examination. The veins over the arms and anterior chest were distended and caput medusae channels were present over the abdomen.

Laboratory studies revealed a venous pressure of 470 mm. water in the upper extremities, circulation time of 25 seconds, hematocrit 36, liver function studies normal. ECG revealed prolonged QRS complexes suggesting interventricular conduction defect.

Bronchoscopy revealed compression of the trachea without erosion. Axillary and prescalene biop-

Case	Diagnosis	Operability	Life Span Following Treatment	Treatment
L. H., 61 year old male	Sarcoma of thymus	Unresectable	One month	None
I. H., 39 year old male	Malignant thymoma	Unresectable	Five years	X-ray therapy
D. S., 36 year old white female	Thymoma	Resected	Still living (1½ years)	Resection only
T. H., 25 year old white female	Lymphosarcoma	Unresectable		X-ray therapy
I. T., 68 year old male	Malignant thymoma	Resected	Still living (4 months)	Resection only
G. D., 23 year old white female	Thymoma	Resected	Still living (Ten years)	Resection only
T. D., 22 year old colored male	Malignant thymic tumor of seminomatous type	Resected	Still living (11 months)	Resection and cobalt therapy
D. D., 32 year old white male	Thymoma	Resected	Still living (one month)	Resection only

CHART I: THYMIC TUMORS

sies were negative for tumor. Needle biopsy through the sternum revealed tumor, probably of thymic origin.

Exploratory thoracotomy was performed at which time the sternum was split and a horizontal incision in the fourth intercostal space was made to widely expose the tumor. Hypothermia was employed. The tumor was laminated and had obviously extended beyond its capsule by direct invasion. The majority of the tumor was removed; however, neoplasm was left overlying the superior vena cava. An attempt to remove this tumor was made, but the vena cava was entered and it was immediately apparent that the caval wall had been completely replaced by tumor. Before adequate control of bleeding could be obtained, 13,500 cc. of blood was required. This, we believe, lends emphasis to the point of avoiding unnecessary dissection when obvious malignancy is present. The bleeding was controlled, and after removal of as much tumor as was feasible, the chest was closed with wire sutures and bilateral thoracic catheters and a substernal catheter were employed for adequate drainage.



Figure I
Large thymoma described in case presentation

The patient received a total of 8,000 roentgens to the mediastinum with the cobalt machine. This patient, at the time of writing is 14 months postoperative, works full time, and has regained 20 pounds in weight. (Fig. I, II, and III)

DISCUSSION

Evaluation of a patient with anterior mediastinal mass should pursue a general pattern somewhat as follows: A chest x-ray with anterior-posterior, oblique and lateral projections is necessary. Fluoroscopy should be done to determine the presence or absence of pulsations or phrenic nerve involvement. A careful history of weakness, easy fatigability, etc., is important to determine the presence of myasthenia gravis. If neuromuscular abnormality is suspected, prostigmine should be given to confirm the diagnosis. Usually control of symptoms of myasthenia can be obtained with 20 to 50 mgm. of neostigmin daily until the thymic tumor can be removed.[6,7] Esophagograms with barium or Lipiodol may reveal the presence of a posterior projection or compression by a large thymic tumor.

A Horner's syndrome may be present and should be looked for. This may occur when tumors are



Figure II

Postoperative x-rays following removal of large thymoma

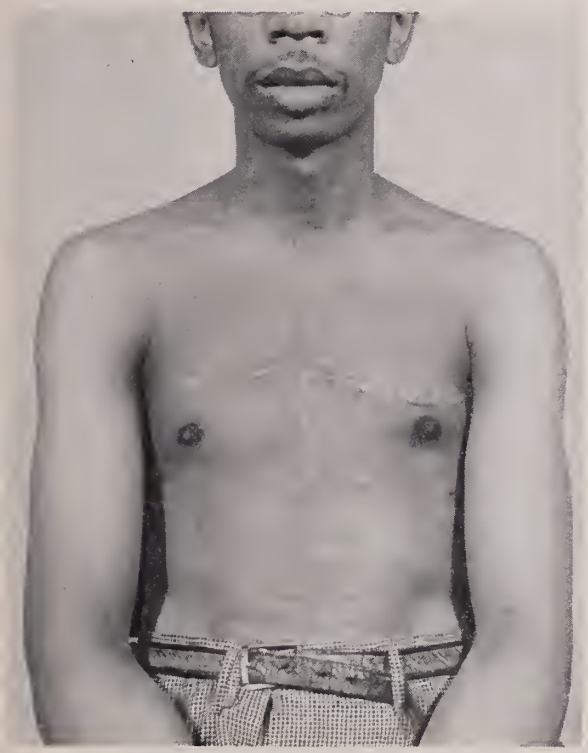


Figure III

Patient one year postoperatively following removal of large mediastinal thymoma

located high in the anterior mediastinum with involvement of the inferior cervical or the superior thoracic sympathetic ganglia. This syndrome consists of partial ptosis of the eyelid, exophthalmos and small pupil, with warmth and dryness of the face on the affected side. A bronchoscopy is always indicated to rule out other bronchogenic lesions, the presence of tracheal or bronchial compression and the possibility of bronchial erosion. Bronchial biopsy is performed if a recognizable lesion can be seen. Actually bronchial erosion even by a malignant thymic neoplasm is extremely rare and erosion by such a tumor would certainly contraindicate thoracotomy. A prescalene biopsy is indicated to rule out other types of malignancy since thymic neoplasms rarely extend this far. Finally, if the tumor is large and located directly under the manubrium, a Silverman needle biopsy can be done with great care. This is not indicated unless the tumor is extremely large, and operability is in question, in which case all modalities of diagnosis are employed. Thymic growths usually occur anterior to the aortic arch at the base of the heart, but may extend downward as far as the diaphragm, since embryologically thymic tissue occurs in this area. Calcified areas are often seen since deposition of calcium occurs in the walls following cystic degeneration.

PATHOLOGY

The pathology of thymic neoplasms remains confusing and as yet not clearly defined. The most common tumor of this gland is the thymoma which is usually a relatively benign process with proliferating lymphocytes (thymocytes) and other cells considered to be epithelial in origin.[8] However, Liebow feels that this other type of cell is related to lymphangio-endothelial tissue.[9] Liebow and Ackerman[10] have done much to describe accurately the cell types found in thymomas and more malignant thymic tumors. Thymomas are well encapsulated and seventy-five per cent of the patients with these growths have associated myasthenia gravis. The so-called Hassall's corpuscles are usually not found in these tumors, but are always present in normal thymus. Since these lesions are well encapsulated, their removal is usual complete. Malignant degeneration or local invasion portends a poor prognosis.

The malignant thymic neoplasms are roughly three in number but are confusing to pathologist and clinician alike because of the mixed types.

I. The Hodgkins type of thymic growth was described by Lowenkaupt.[11] The tumor pos-

sesses a distinct capsule and is subdivided into lobular partitions by inward extension or septae. There are cellular tumors with large prominent nucleoli similar to the Reed-Sternberg cells of Hodgkin's Disease. Lymphocytic stroma and fibroblastic proliferation are extensive. This tumor spreads by direct extension and frequently involves and replaces the wall of the vena cava and may spread to adjacent lung lymphatics.

II. A second malignant type resembles the seminoma of the testis. This tumor also spreads by local invasion and does tend toward disseminated metastases.

III. The third type is the thymic malignancy of an anaplastic or undifferentiated variety. These tumors are fortunately rare, but occur in young adults, usually males, between the ages of 10 and 25 years.

These three variants of thymic tumors rarely have any association with myasthenia gravis and their clinical course is relatively short and always fatal.

SURGICAL APPROACH

The surgical approach to thymic tumors must be adapted to the position of the growth. Posterolateral thoracotomies are employed for tumors predominately localized to one hemithorax. Sternum splitting procedures are used for midline growths and a combined sternum splitting with right or left intercostal incision may be used if extension into one or other pleura is required. We have performed sternum splitting as well as bilateral intercostal incisions on one patient in order to adequately and safely remove the thymic tumor. The use of curare is definitely contraindicated where myasthenia gravis is suspected or previously diagnosed. Some thymic neoplasms may involve the superior vena cava and other contiguous vital structures such as the pericardium and aorta, hypothermia is often a wise anesthetic adjunct when the resection of a large tumor is contemplated. Blood loss during the procedure may be significant and since the malignant lesion often replaces the walls of the major vessels, hypothermia may be life saving. Attempt at cleanly removing all tissue from the wall of the superior vena cava is not usually feasible, especially after it is ascertained that one is dealing with an invasive type of tumor. Since complete extirpation of these malignant tumors is not possible after extensive local invasion has occurred, any heroic attempt at "cure" is a fool-hardy, often fatal maneuver. The surgeon should then be satisfied with removal of the bulk of the tumor so that the residual can be treated with deep x-ray or cobalt therapy. Removal of the bulk of a malignant thymoma is especially important where superior caval obstruction is present on the basis of compression.

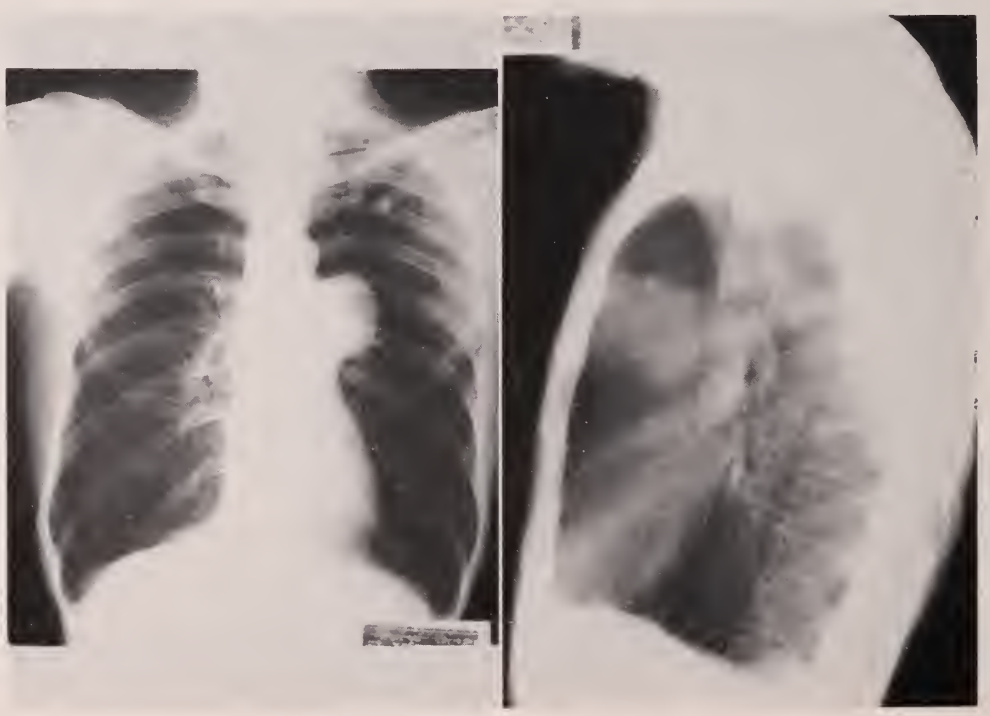


Figure IV
X-rays showing typical thymoma location



Figure V
Postoperative x-ray following excision of thymoma

cobalt therapy where malignancy exists. It is not always possible to resect these tumors completely, because of their close association with mediastinal structures and their invasive tendency.

Bibliography

1. Effler, D. B. and McCormack, Jr.: Thymic Neoplasms. J. Thoracic Surg. 31: 60, 1956.
2. Bell, E. T.: Tumors of the Thymus and Myasthenia Gravis. J. Nerv. & Ment. Dis. 45: 30, 1917.
3. Blalock, A., Mason, J. F., Morgan, H. J., and Riven, S. S.: Myasthenia Gravis and Tumors of the Thymic Region. Report of a case in which the tumor was removed. Ann. Sur. 110: 544, 1939.
4. Heuer, G. J. and Arenelins, W. D.: The Surgery of Mediastinal Tumors. Am. J. Surg. 50: 146, 1940.
5. Ringertz, N., and Lidholm, S. O.: Mediastinal Tumors and Cysts. J. Thoracic Surg. 31: 488, April, 1956.
6. Blalock, A.: Thymectomy in the Treatment of Myasthenia Gravis: Report of Twenty Cases. J. Thoracic Surg. 13: 316, 1944.
7. Clagett, O. T. and Eaton, L. M.: The Surgical Treatment of Myasthenia Gravis. J. Thoracic Surg. 16: 62, 1947.
8. Seybold, W. D., McDonald, Jr., Clagett, O. T. and Good, C. A.: Tumors of the Thymus. J. Thoracic Surg. 20: 195, 1950.



Figure VI
Cross section of thymoma showing gross lobulation

In all cases of malignancy, the mediastinum and as much of the involved adjacent tissue as possible should be irradiated in the postoperative period. Unfortunately these lesions often resemble sarcomatous growth and are similarly radioresistant.

SUMMARY AND CONCLUSION

Thymic tumors are moderately rare lesions in comparison with other mediastinal tumors. Resection of these lesions is always indicated, if possible, and should be followed by conventional x-ray or

9. Hubell, D. S., and Liebew, A. A.: Thymic Tumors Characterized by Lymphangio-endothelial Structures. Am. J. Path. 28: 321, 1952.
10. Ackerman, L. V.: Surgical Pathology. St. Louis (1953) The C. V. Mosby Company, p. 197.
11. Lowenkaupt, E.: Tumors of the Thymus in Relation to Thymic Epithelial Anlage. Cancer, 1: 547, 1948.

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Subacute Thyroiditis

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THE COMMONEST TYPE of thyroiditis is the subacute type. At times it is quite classical but may easily be mistaken in its mild forms for pharyngitis.[5] Its clinical and histological picture was first clearly described in 1904 by de Quervain, but the clinical entity had remained unknown until recently.[9] This rather benign disease has been called by several names, such as de Quervain's Thyroiditis, acute recurrent, pseudotuberculous, and giant cell thyroiditis, but is usually designated today as subacute thyroiditis. This term distinguishes it from the suppurative form, the nonsuppurative type, which lasts only a few days, and from Hashimoto's and Riedel's struma, the chronic forms, to which it is not related. This paper will be a discussion of subacute thyroiditis and a presentation of a case.

Although the etiology of subacute thyroiditis has never been established, Eylan et al have presented evidence that the disease may be caused by the mumps virus.[3] The pathological picture of this thyroiditis begins with acute inflammatory destruction of the follicles, edema, and polymorphonuclear leukocyte infiltration.[2,5] Histiocytes then appear, followed by giant cell formation. The whole lesion develops a granulomatous appearance. Later fibroblastic proliferation occurs. As recovery ensues, the whole picture reverses itself, and the follicles regenerate. However, a variable amount of interstitial fibrosis remains.

The onset of thyroiditis may be insidious, but is more often rapid. The chief complaint is pain located over the thyroid gland, and it often extends to one or both ears. This is most always associated with an enlarged, tender thyroid gland. Fever, general malaise, headache, fatigue, and dysphagia are often present. Because of the extravasation of thyroglobin into the circulation during the acute phase of the disease,[2,5,9,14] the patients frequently have the manifestations of hyperthyroidism, e.g., tachycardia, nervousness, weight loss, heat intolerance, and tremors. However, in some of the mildest forms not all of these symptoms are obvious. Later in the course of the disease the gland becomes depleted of colloid, and a transient hypothyroid state may appear.

The diagnosis can nearly always be made on physical examination. Usually both lobes of the thyroid gland are moderately enlarged, firm, and very tender. Occasionally only one lobe is involved. The tachycardia is out of proportion to the fever, and often the overall impression is that of hyperthyroidism in the earlier phases.

The white cell count is often elevated, and a high sedimentation rate is invariably present. This later finding usually parallels the course of the disease. The basal metabolism and the serum protein bound iodine levels are usually elevated initially in all but the mildest cases.[5,10] The radioactive iodine uptake is characteristically low.[4,5,9,10] Later the protein bound iodine falls to normal or hypothyroid levels. With recovery the radioactive iodine uptake rises first and is followed by the protein bound iodine later.[4,5,9]

The course of subacute thyroiditis is benign, and the gland returns to normal in a few weeks to several months.[9] Occasionally an exacerbation may occur, and only rarely does the complication of myxedema or hyperthyroidism occur.[9,12]

The treatment of subacute thyroiditis has varied in recent years. Some still believe that strict bed rest is helpful.[15] Thiouracil and related drugs have been proposed by others, although now most question its value.[9,13] Thyroid extract is sometimes indicated if symptoms of hypothyroidism develop during the course of the disease.

The corticosteroids are strongly advocated by many[1,6,9,16-19] because they suppress inflammatory processes. The effect is often dramatic, with marked subjective and objective improvement in twenty-four hours. The corticosteroids should be continued for two or three weeks, or longer, when used, for recurrences are not uncommon. Although they benefit the patients symptomatically they probably do not shorten the course of the disease.[5,20,21] Others feel that the disease responds best, with a shortened course, to radiation therapy.[5,8,9,11,21] The usual dosage of x-ray recommended is 200 to 400r in divided doses. Some feel that a combination of the corticosteroids plus radiation gives the best results.[21]

The following is an illustrative case which responded to a combination of the corticosteroids plus radiation.

CASE REPORT

A thirty-four year old white female was first seen in August, 1957, complaining of soreness and aching of four days duration in the thyroid region of the neck which extended to both jaws. Prior to this she had run a low grade fever and had been previously treated for acute pharyngitis. She admitted being nervous and fatigued.

Examination revealed her to have an anxious appearance. Her blood pressure was 120/70 and pulse 90. The thyroid gland was very tender and moderately enlarged. The rest of the physical examination was normal.

A diagnosis of acute thyroiditis was made, and the patient was put on sedation, codeine, and Meticorten. Three days later she was improved and the Meticorten dosage was reduced. A week later, however, her symptoms had returned. She was resumed on larger doses of Meticorten which were again to be gradually reduced. Once more she improved temporarily.

Two weeks later the patient returned complaining of increasing nervousness, heat intolerance, and weight loss in spite of no change in appetite. Her thyroid gland had become further enlarged and was again very tender. At this time her blood pressure was 150/68 and pulse 110. The skin was more moist and clammy. There were some fine tremors of her hands. She was then admitted to the hospital for further studies and treatment.

Her laboratory studies on admission revealed a 13,000 white cell count with a normal differential, a high sedimentation rate, and a blood cholesterol of 148. Her protein bound iodine was 10.8 mcg. A radioactive iodine uptake was done two days after admission which was practically nihil in twenty-four hours. The chest x-ray and electrocardiogram were normal.

A diagnosis of subacute thyroiditis with hyperthyrodism was made. The patient was again given 40 mg. daily of Meticorten plus 150r of radiation therapy in divided doses. She improved rapidly and dramatically on this combined regime. The dose of Meticorten was then gradually reduced to 20 mg. daily.

However, approximately one week later she began to feel "slowed down" and tired. Her pulse fell to 80 and her blood pressure was 125/70. Her skin became less moist and her appetite decreased. The blood cholesterol rose to 218. Four days later her protein bound iodine was 4.5 mcg. and cholesterol was 268. Because it was felt she might be progressing towards a hypothyroid state, she was started on a small daily dose of thyroid. After two weeks of hospitalization she was discharged, feeling much improved, to continue on the Meticorten and thyroid.

About ten days later, when seen on follow-up examination, she had increased her thyroid to 65 mg. daily and had noticed some slight increase in nervousness. Her blood pressure was 130/70 and her pulse 100. Her thyroid gland was reduced in size and was not tender. The dose of thyroid extract was reduced. There was also a further reduction in the Meticorten dosage.

Two weeks later she reported she felt still further improved. Her blood pressure was 120/70 and her pulse was 70. The thyroid gland was almost back to normal size. Over the next three weeks her thyroid and Meticorten were gradually eliminated. When last seen four months later she was completely normal.

SUMMARY

Subacute thyroiditis is not a rare disease and is the commonest form of thyroiditis. There is evidence to suggest that it is caused by the mumps virus. Pathological examination of the thyroid usually reveals a rather characteristic inflammatory appearance. The clinical picture is usually that of a tender enlargement of the thyroid gland plus the signs of hyperthyroidism in the early stages. Initially the protein bound iodine is elevated and the radioactive iodine uptake is depressed.

The use of the corticosteroids gives both dramatic symptomatic and objective improvement in this disease. X-ray therapy probably shortens its course. A combination of these two forms of therapy has been recommended. Subacute thyroiditis can run a severe or mild course, but it is a benign disease.

References

1. Skillen, P. G., Nelson, H. E., and Crile, G. Jr.: New Observations on Subacute Thyroiditis. J. Clin. Endocrinol. 16: 1422, 1956.
2. Soffer, Louis J.: Thyroiditis; Diseases of the Endocrine Glands. Second ed., p. 819. Lea and Febiger, Philadelphia, 1956.
3. Eylan, E., Zmucky R., and Sheba, Ch.: Mumps Virus and Subacute Thyroiditis: Evidence of Causal Association. Lancet I: 1062, (May 25) 1957.
4. Paulson, E. C.: Radioiodine Uptake in the Diagnosis of Thyroiditis. Minnesota Med. 39: 387, 1956.
5. Volpe, R. and Johnson, M. W.: Subacute Thyroiditis; A Disease Commonly Mistaken for Pharyngitis, Canad. M. A. J. 77: 297, (Aug. 15).
6. Taylor, L.: Cortisone Versus X-ray in the Treatment

of Subacute Thyroiditis; A Report of Four Cases. Ann. Int. Med. 44: 1082, 1956.

7. Crile, G., Jr.: Thyroiditis. Ann. Surg. 127: 640, 1948.
8. Osmond, J. D., Jr. and Portmann, U. V.: Subacute Thyroiditis, Am. J. Roentgenol. 61: 826, 1949.
9. Moldover, Aaron: Subacute Thyroiditis; Arch. Int. Med. 98: 322, 1956.
10. Hamilton, H. E., Kirkendall, W. M. and Barker, S. B.: Radioactive Iodine Uptake of the Thyroid and Plasma Bound Iodine in Subacute Thyroiditis. J. Clin. Investigation 29: 819, 1950.
11. Crile, G., Jr. and Rumsey, E. W.: Subacute Thyroiditis. J.A.M.A. 142: 458, 1950.
12. Sheets, R. F.: The Sequential Occurrence of Acute Thyroiditis and Thyrotoxicosis. J.A.M.A. 157, No. 2: 139, 1955.
13. Wyngaarden, J. B.: Antithyroid Drug and Acute Thyroiditis. New England J. Med. 245: 706, (Nov.) 1951.
14. Cutler, M.: Treatment of Subacute Thyroiditis with Corticotropin. J.A.M.A. 155: 650, 1954.
15. St. John, J. H., and Nicholson, W. M.: Evaluation of Treatment of Thyroiditis. South, M. J. 44: 1059, 1951.
16. Lasser, R. P.: Subacute Thyroiditis Treated with Cortisone. J.A.M.A. 152: 1133, 1953.
17. Kahn, J., Spritzler, R. J., and Shector, W. E.: Cortisone Treatment of Subacute Nonsuppurative Thyroiditis. Ann. Int. Med. 39: 1129, 1953.
18. Teitelbaum, S. L. and Rosenberg, E. F.: Acute Thyroiditis Treated with Cortisone. Ann. Int. Med. 38: 1062, 1953.
19. Clark, D. E., Nelson, T. S., and Raiman, R. J.: Subacute Nonsuppurative Thyroiditis Treated with Cortisone. J.A.M.A. 151: 551, 1953.
20. Benjamin, Z. H.: Subacute Thyroiditis. Am. J. Med. 18:667, 1955.
21. Crile, G., Jr.: Thyroiditis. Ann. Int. Med. 37: 519, 1952.

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All Work and No Play

"Too much work and not enough play" is an occupational dilemma the U.S. physician should resolve if he wants to keep up his own health standards.

Evidence presented in the current issue of "Patterns of Disease" reveals that the average physician is so busy taking care of others that he doesn't have time to take care of himself.

Prepared by Parke, Davis & Company for the medical profession, "Patterns of Disease" reports a special survey on physicians' health practices and standards. The survey, both the largest and most recent of its kind, was conducted among more than 9,000 practicing physicians under 65 years of age engaged in private practice in this country.

The U.S. physician undertakes a far heavier work load than the average person, "Patterns" reports. Half the physicians in this study reported a work week of 50 hours or longer—at least 20 per cent more than the accepted norm of 40 hours. In fact, 13 per cent work 60 to 64 hours and 6 per cent 80 hours or more!

The result is he has very little leisure time. Close to 60 per cent of the physicians in the study stated they spend less than 10 hours a week on recreation. Even the physician with a hobby has virtually no opportunity to pursue it. Of the 37 per cent who mentioned hobbies, for instance, half stated that they spent only four hours a week or even less on their particular hobby.

Vacations, too, tend to be inadequate. One out of 20 physicians reported they took no time off for vacations during the year, and more than one in 10 took only a week or less.

Despite his crowded working schedule, the physician loses less time from work due to illness than the average man. Two-thirds of the doctors reported no time lost from work last year. The remaining third reported an average time of 3.8 days lost due to illness as against 7.4 days of work-loss by the average American man.

Post-Cholecystectomy Symptoms

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THE PERSISTENCE or recurrence of symptoms after cholecystectomy will usually cause the patient great distress and the surgeon equally great chagrin. In a discussion of this matter, however, one should at the outset pointedly differentiate two groups of patients. Patients in the first group have symptoms never referable to the biliary tract in the first place. Patients in the second group have symptoms because the operation did not deal adequately or properly with the original biliary tract disease or dyscrasia or because the operation introduced some new factor or factors responsible for biliary tract symptomatology. Obviously the problems in the two groups are vastly different.

The first group of patients theoretically should not exist. But it does exist and we must try to diminish its size. That entails taking all possible steps to establish a positive preoperative diagnosis on the one hand and on the other hand to rule out other conditions that may simulate biliary tract symptoms. A corollary consideration, of course, is the effort to find and the ability to recognize at the time of operation not only abnormalities of the biliary tract but abnormalities of other organs or systems that may be the source of symptoms simulating those of biliary tract origin. In short, the first group of patients consists of those in whom an incorrect diagnosis has been made and improper treatment administered if an operation on the biliary tract has been performed.

The solution of this aspect of the problem lies for the most part in the field of diagnosis. In these days of super-science the physician and the surgeon may rely all too often on what might be called "push-button diagnosis". He fails to learn from the patient the character and the circumstances of the symptoms, what modifies them, what relieves or aggravates them. He fails to painstakingly examine the patient. Instead, he conducts the patient through a maze of laboratory and x-ray procedures and finally commits the crowning error of failing to use intelligence and discrimination in interpreting and correlating the various facts and factors involved in the case. It is of course equally dangerous to rely too much on what some like to call "clinical judgment". All too often it is less judgment than guess or hunch. True clinical judgment represents intelligent estimation based on digested experience. There should be no conflict in importance between the clinical, the laboratory, and the x-ray features of a case. Each one should complement and supplement and facilitate the other. If that were more often the case the result would be fewer missed diagnoses and fewer gallbladders removed when the actual trouble might be peptic ulcer, urinary tract stone, pylorospasm or other functional or organic troubles.

It goes without saying that not all patients with biliary tract disease will have typical histories and physical, laboratory and x-ray findings and it is of course obvious that sometimes the diagnosis of biliary tract disease must be made and operation performed without all the findings being typical and without all other possible systems sources of symptoms having been specifically ruled out. Just how far to go in diagnostic procedures must be left to clinical judgment exercised carefully, honestly, and with the best interest and safety of the patient the primary considerations.

The second group of patients is composed of those who had and still have symptoms referable to the biliary tract although they have had the gallbladder removed. For some reason dysfunction or organic trouble remains and causes the patient trouble. The source of the symptoms may be the liver, the ducts, the common bile duct sphincter, or related disease of the pancreas. For the purposes of this discussion they may be tabulated as follows:

1. Liver
   a. Cholangitis
   b. Hepatitis
2. Extrahepatic Bile Ducts
   a. Cystic Duct Remnant
   b. Stone in Common Duct
   c. Stricture of Common Duct
3. Sphincter of Common Bile Duct
   a. Stenosis
   b. Spasm (Biliary Dyskinesia)

Presented at the Annual Meeting of The Medical Society of Virginia, October 12-14, 1958, in Richmond.

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4. Related Disease

a. Pancreatitis

As for the liver, cholangitis and hepatitis represent a small and usually a relatively unimportant part of the problem. Diagnosis is not too difficult and treatment by general measures and antibiotics will bring about resolution in most instances fairly promptly. Surgery is rarely indicated.

Trouble in the extrahepatic bile ducts, however, accounts for the majority of post-cholecystectomy symptoms. While up to a relatively few years ago few considered it important to remove the cystic duct with the gallbladder, now more and more surgeons are learning that a cystic duct or part of it remaining after cholecystectomy will not always but undoubtedly will in some instances cause symptoms. The symptoms are essentially the same as those from a diseased gallbladder and they may occur as a persistence after operation of the preoperative symptoms or they may represent a recurrence of those symptoms weeks, months, or even years after operation.

In a little less than a 20 year period, 31 patients have been operated upon by the essayist for post-cholecystectomy symptoms apparently due to cystic duct remnant. Seven were reported in 1948[1], an additional 13 in 1954[2] and 11 have been encountered since then. A similar group of 35 patients was reported by Glenn and Johnson in 1955.[3]

Curiously enough no cystic duct remnants with or without symptoms have been encountered in patients whose gallbladders were removed by the essayist although it is certain that in early years cystic duct remnants were left from time to time. On his private service in the same 20 year period referred to above, 1937-1956 inclusive, 607 cholecystectomies were performed. In the ten preceding years 114 cholecystectomies were performed. As far as is known no instance of symptoms from a cystic duct remnant has come to light in the total 721 patients.

Localization of the post-cholecystectomy symptoms to the extrahepatic biliary duct system may or may not be easy. First it will be wise to rule out, as far as possible, other organ and system sources of the symptoms. The diagnosis of cystic duct remnant as the cause of post-cholecystectomy symptoms frequently cannot be made with certainty though sometimes the remnant may be visualized in x-rays made after the administration of cholografin. The persistence of or the recurrence of typical biliary tract symptoms after cholecystectomy, however, should lead one to suspect the probability of either a cystic duct remnant or a stone in the common duct or a stricture of the common duct as the three most likely possibilities and should cause one to explore the abdomen. The possibility of duct anomalies should always be kept in mind at the time of exploration.

What part is played by the common bile duct sphincter in post-cholecystectomy symptoms is hard to determine. Of course it is common knowledge that damming of bile by duct obstruction due to a stone causes pain and other symptoms. Duct obstruction due to sphincter stenosis or spasm, while not as great, may be sufficient to cause pain and other symptoms. Womack and Crider[4] on the basis of finding neuromas along the common duct in some cases after cholecystectomy, suggested that there might be a neurogenic factor responsible for interference with normal sphincter relaxation and empyting of the duct, hence responsible for post-cholecystectomy biliary dyskinesia, the abnormal kinetics or mechanics of emptying the biliary tract. It is on this basis that sphincterotomy, division of the sphincter of Oddi, has been advised. Good results have been reported by some.[5]

The association between biliary and pancreatic disease is not uncommon. Undoubtedly some post-cholecystectomy symptoms due originally, in part at least, to biliary tract disease must be attributed to the related and persistent pancreatitis. To explore that aspect of the subject fully would entail a full discussion of pancreatitis and that is out of the question at this time. But it is important to realize that a full consideration of pancreatitis may be a necessity in solving the problem of a definite number of patients with persistent or recurrent symptoms after cholecystectomy.

In treating the patient with post-cholecystectomy symptoms one's first aim should be, as already mentioned, to make sure that the symptoms may not have come from some other source than the biliary tract in the first place. Appropriate diagnostic procedures, clinical, x-ray, and laboratory, should be resorted to; antispasmotic drugs, antibiotics and careful observation over a period of time may be helpful diagnostic as well as therapeutic measures.

Failing in these measures to secure the patient's relief, operation must be resorted to. The operation is best performed under the perfect relaxation afforded by subarachnoid block anesthesia. Vertical or transverse incisions at the right costal margin provide satisfactory exposure. First, the liver edge must be identified and the undersurface of the liver followed downward by sharp knife dissection to the hilus of the liver and the common bile duct. The

presence or absence of a cystic duct remnant or any neuroma-like scarring can be readily determined and the hepatic and common bile ducts examined and explored so that a stone or a stricture may be discovered. Passage of probe dilators (Bakes) will give reasonably good clues in regard to the state of the sphincter of the common duct, whether there may be organic stenosis or functional spasm. Inspection of the adjacent pancreas will determine whether pancreatitis or a previously missed tumor of the pancreas may be present. Duodenotomy may be desirable for visualization of the sphincter and papilla. Retrograde probing of the duct may be useful and if division of the sphincter should be desirable it can be done at this time.

Cystic duct remnants commonly lie within the adventitious outer layers of the common duct itself so that careful sharp knife dissection is necessary to avoid damage to the common duct but at the same time free all the cystic duct remnant for removal. Common duct stones are notoriously difficult to identify in some instances. Forceful irrigation of the duct between the passage of the various sizes of dilators offers one of the surest methods of finding and removing the stone or stones. Cholangiegrams made on the operating table are subject to the same errors as those made postoperatively and while helpful in the hands of some probably do not lend themselves very well to general use at present. Common duct strictures usually necessitate either some plastic procedure on the duct, or resection and anastomosis or re-implantation of the duct. If pancreatitis is found the surgeon must deal with it as best he can and I need not remind you here of the difficult and frequently unsatisfactory elements in handling pancreatitis.

In a brief discussion such as this it is impossible to cover all aspects of the problem of post-cholecystectomy symptoms. Nevertheless, I should like to reiterate, its incidence will be minimized to the degree that care is exercised in preoperative diagnosis and skill is employed in operative technique. Once dedeveloped, however, if its possible causes are kept in mind, a reasonably accurate diagnosis of its source may be made. If an operation is undertaken for the relief of post-cholecystectomy symptoms the utmost experience and care and skill on the part of the surgeon are necessary if still further or possibly even worse trouble are to be avoided.

Bibliography

1. Morton, C. B., II: Post-cholecystectomy Symptoms Due to Cystic Duct Remnant. Surgery 1948 (Nov.) 24: 779-786.
2. Morton, C. B., II: Post-cholecystectomy Symptoms from Cystic Duct Remnants. Ann. Surg. 1954 (May) 139: 679-688.
3. Glenn, Frank and Johnson, George, Jr.: Cystic Duct Remnant, A Sequela of Incomplete Cholecystectomy. Surg. Gynec. & Obst. 1955 (Sept.) 101: 331-345.
4. Womack, N. A. and Crider, R. L.: The Persistence of Symptoms Following Cholecystectomy. Ann Surg. 1947, 126: 31-55.
5. Walters, W.: Post-cholecystectomy Dyskinesia with Pancreatitis, Sphincteritis and Choledocholithiasis as Causes. J.A.M.A. 1956 (Feb. 11) 160: 425-431.

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Hormone Injections Solving Obstetrical Problem

A common obstetrical problem is being solved by the use of a new combination of harmones. Breast enlargement and milk flow in women who do not wish to nurse their babies can be inhibited by the injection of the hormone combination during or immediately after delivery. The preparation, called Deladumone (trade name), is composed of a male hormone and a female hormone.

Drs. Benjamin Lo Presto and Erol Y. Caypinar, Brooklyn, said in the January 17 Journal of the American Medical Association that classic methods (fluid limitation, breast binders, ice packs, or sedation) have rarely been successful in eliminating the discomfort in non-nursing mothers. The individual use of the two hormones also has not been too successful.

They treated 197 women with Deladumone and found it to be most effective when given as a single injection immediately after the first stage of labor. It was "notably free" of unwanted effects.

Three Binghampton physicians (Drs. Joseph B. Watrous, Jr.; Robert E. Ahearn, and Milton A. Carvalho) gave single injections to 132 women. They found it to be most successful when given within one hour after delivery. The only undesirable effect that occurred was a slight to moderate reddening and swelling at the site of injection.

Emotional Influences of Vocal Cord Abuse

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POST-OPERATIVE MANAGEMENT of a case of carcinoma of the larynx entails not only the post-operative period until the patient leaves the hospital, but, of necessity, entails observation and treatment for associated conditions which occur during a five year period post-operatively. Successful management thus not only includes treatment for associated diseases, which are organic, but sometimes diseases which are functional in nature.

Of late there have been reports appearing in the literature by those authors who are interested in stress, who have theorized that there is organ selectivity in disease. In addition, there have been reports of differences of pitch and tone of the voice which are called pathognomonic of emotional tensions. Those interested in the training and redevelopment of normal production of speech by rehabilitation of the various associated organs have listed in detail the abnormalities which depend on conscious or unconscious emotional inadequacies as the cause of initiating effect. These theories have been derived from a solid basis of fact, which has been established by years of standard psychological testing.

In facing the challenge of adequate post-operative management of some of the recalcitrant individuals who have cancer of the larynx, the author selected two standard psychological projective tests to develop his insight into the unconscious attitudes of these patients. An adequate understanding will thus let the physician more easily guide the patient to a more comfortable result. It lets him know whether the patient may regard him as a friend or enemy, and it saves much time during his post-operative management period.

CASE HISTORY

Mrs. M. E. C. This white female, age 41, tall, asthentic and nervous was first examined on October 21, 1955, with a history of long standing roughness of the voice, with occasional aphonia at times of familial disagreements. She worked as a bookkeeper in one of the department stores and felt that she was the only source of family income. Her husband was retired due to a heart condition several years before. Although she owned some property, management of this caused great strain. It was my impression that she was fearful of financial stress affecting the family, if she were forced to quit work. Voice tones were tight and rasping, and she exhibited mild to moderate anxiety. Examination of the larynx showed the glottis to be chronically inflamed. The cords were equal in size, position, and movement, but the color varied from normal to deep red. There was edema present in the lower part of the epiglottis and the anterior commissure. There was no visible lesion. Her initial instructions requested that she stop smoking, engage in voice rest, take steam inhalations, and treatment for a mild upper respiratory infection.

On October 29th, examination of the larynx showed improvement and a lessening of the inflammation. It was ascertained that she had not followed her instructions as to steam, voice rest or medication satisfactorily, for she stated this procedure would have inconvenienced her. She exhibited disdain particularly for voice rest and steam, and refused to stop smoking. It was decided that we would handle her negatively with regard to her sex, and I appealed to her as the head of the family to protect her income. This approach was found to be more effective, and although she denied the need for immediate operation, she did follow her classical routine more fully. On the third visit on November 4th, the inflammation had entirely left the larynx, but the area of edema in the anterior commissure still remained. Then she yielded, with regard to the necessity of laryngoscopy and biopsy. She admitted that she had been developing a growing horror of what was apparently coming, and she had not been acting reasonably. On November 10, 1955, laryngoscopy was done, and when the edematous area was put on a stretch, a small papilloma was found arising from the junction of the right cord and the anterior commissure. This was removed and reported as "Carcinoma, Grade 3", and at the unhappy interview at which she was told that a larger operation was to be done on her, she became mildly hysterical. Fortunately, the charge nurse was present, and between the two of us, we prevented her from leaving her bed to jump out of the window. She exhibited intense

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anxiety, tremors and a moderate maniacal reaction, exposing her multiple fears of family dissolution, particularly that of her earnest desire to help her son finish college. She noted that her 19 year old daughter already had one unhappy marriage and divorce behind her, and was facing another similar marriage which would probably be as unsatisfactory. She told us that her husband was of no help to her in his behavior, conduct or cooperation, and she sincerely believed that if a laryngectomy was done on her, she would commit suicide. At the conclusion of this unhappy interview, I promised her that if at all possible, a portion of her vocal cords would be left in place, so she would not have to learn to use esophageal speech.

A laryngo-fissure was done on November 16th. The whole of the right cord, the anterior commissure and the anterior third of the left cord was removed. All tissues remaining were thoroughly cauterized with the electro-surgical knife. No spillage of the lesion occurred. She had an uneventful course, postoperatively, and the tracheotomy tube was removed on November 24th. She was discharged on the 26th.

After she had left the hospital, the pathologist reported that the section demonstrated a cord of cells at the edge of the section, approximating the posterior remainder of the right cord.

Thus, I was faced with a "fielder's choice". I could treat the tumor and disregard the wishes of the patient, or treat the patient, and within reasonable limits, control the disease.

Under these conditions, I chose the latter and insisted that she receive x-ray therapy. This was started on approximately December 15, 1955, through two portals, under the auspices of the American Cancer Society, and by January 10, 1956, she had received 2500 units. By this time also, she had developed a huge node in the right side of her neck, which measured 2 x 3 fingers breadth in diameter. Continuation of x-ray therapy after the node appeared, caused a diminution in the size, but not a disappearance. Consultation was sought with Dr. Robinett of Portsmouth, and he agreed that a right radical neck resection was indicated. This was done on 1-12-56 by both of us. The patient made an uneventful recovery from this operation. The initial pathological studies showed the presence of "tuberculous adenitis" in the glands of her neck, and a full and extensive review of all surgical tissue was made by the pathologist, with the final report that there was no cancer tissue in this side of the neck, but the nodules found were those of tuberculosis. She was given careful follow up treatment, and after she was discharged from the hospital on February 2nd, she was treated as an out-patient, with Districin 1 gram, intramuscularly, weekly, and INH 100 mg three times a day, times 7. She returned to work on approximately the first of March 1956, and has been seen at regular intervals since that time.

On October 3, 1956, the larynx showed a greatly shortened aperture, but no lesion was present. The healed scars in the position of the previous scars had developed enough bulk to give her an audible voice.

During the fall of 1956, she joined the American Cancer Society sponsored laryngectomee club, and took a great interest in its activities. Although she was not truly a laryngectomee, her distorted voice, her scars and her interest made her a welcome member. Yet, although she performed her duties creditably, she was very unhappy and moderately depressed, and exhibited much concern. During the spring of 1957, the Norfolk Chapter of the American Cancer Society started their initial experiments with speech therapy for the laryngectomees. She became an enthusiastic member of the group in the beginning. Yet, the therapist found that she would not willingly engage in any exercise or any voice or speech controls which he set up for her, in order to produce a greater resonance and more effective quality to her voice. He found that she became quite withdrawn when criticized and was at a loss to know how to handle her objectively. During the summer of 1957, she was asked to take projective testing, in order that we would be better able to understand her. Any gain to her was denied, so that the only reason for her doing this was because of the rapport maintained by the author.

In this regard, projective testing is so presented to the patient that he instills himself and what he thinks, into his answers. There are many tests, and the two selected here for this study were the Rorschach and the House-Tree-Person test. The clinical psychologist's report is as follows:

> The activity level is poor. The productivity is retarded. The inner drive is impoverished, due to projection. Emotional type is immature and reactive. The Ego type is conflictful, but leading to introversion. Anxiety is present, both free-floating and specific. Depression, severe reactive (*secondary type*). Ego image is impoverished (*poor attitudes toward self*). Is dependent. The reality contact is poor and artificialized. There is projected hostility. Is dependent on the female au-

thority figure, but anxious in regressive state. There is hostile protest to the male authority figure, but appearing as a reaction formation, in the need for identification with her father.

Translated into English which an average clinician can understand, these tests indicate that the patient is in continual conflict concerning the authority figures. Since much of her inner drive is dissipated into other channels, she has little creative productivity. Since she is emotionally immature, scenes of family disagreement are controlled by withdrawal, either actual or passive. The aphonia and dyspnea suggest organic reaction to the functional disorder. When she feels actual aggression, she becomes passive and openly dependent upon the aggressor. When she can dominate the situation, she does so, as evidenced in her efforts to continue as the family breadwinner. When she assumes the dependent role, her projected hostility prevents her from changing her intention to resume the aggressive role when it becomes possible. Since the anxiety and secondary depression arise from deep-seated conflicts, these moods are not easily eliminated. Since she has a poor attitude towards herself, fleeting ideas of self-destruction are not unusual.

This psychological report and its translation were not taken at face value however, in the management of Mrs. E. M. C. Using it as a guide, we could understand why the male figure in the family failed to impress her, and why the male speech therapist had been unable to get her to cooperate whole heartedly. We could accept her immature emotional pattern and understand the passive-aggressive attitude. Since the social relationship reality contact was poor, we could understand her inability to make lasting friendships. We suspected that some of her daughter's marital disturbances had been caused by her interventions, and that some of it was due to the daughter's immaturity.

Following my assimiliation of these results, I found that her specific anxiety in relation to her health, made her cooperate more fully with voice rest, steam inhalations and other medical advice, when an episode of hoarseness occurred.

Periodic re-examinations have been done now for 2½ years, but they are conducted in a restrained manner, and little time is needed for reassurance. She has found that her appearance and changed audible voice have given her a new accepted authority in her home, job and social relationships.

SUMMARY

Post-operative management of vocal abuse becomes more efficient if the unconscious emotional attitudes of the patient are taken into consideration. A demonstrative case has been discussed.

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Nose Surgery in Childhood

Nose surgery before a child is 14 should be kept to an absolute minimum, according to two Eastern otolaryngologists.

Surgery to correct nasal deviations should be delayed whenever possible until the nose has reached its full growth between the ages of 14 and 17, the doctors said in the December Archives of Otolaryngology, published by the American Medical Association.

Surgery in the early years may interfere with the nose's growth and result in further deviation. Surgery should be performed only in situations where the deviation interferes with the passage of air.

The doctors also reported a new operation for repairing the bone that divides the nose into two chambers. It is better to make several small vertical incisions near any buckled area of cartilage than to make one long incision. This is recommended so that only a minimum of cartilage will be removed and that only a minimum of interference with the nutrition of the remaining cartilage will occur.

The authors are Dr. Joseph G. Gilbert, Roslyn Heights, N.Y., and Dr. Samuel Segal Jr., Springfield, Mass.

The Treatment of Spontaneous Pneumothorax by Thoracoscopy, Poudrage and Intra-pleural Suction

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THE TREATMENT of "spontaneous pneumothorax" has been greatly altered in the past decade, and there is some confusion and disagreement concerning the proper management of this condition. It is not the purpose of this paper to present a statistical analysis of 74 cases treated by thoracoscopy, and intra-pleural suction, with and without poudrage, but to define the condition which may be successfully treated by this method, describe the technique employed, and to comment on some concepts relative to the procedure.

Spontaneous pneumothorax was recognized as a clinical entity when Laennec first made the diagnosis in a living patient in 1819. As recently as twenty years ago, it was generally believed that spontaneous pneumothorax was indicative of pulmonary tuberculosis. Tuberculosis, percentage-wise, is a rather uncommon cause and, although it may seem frequent in the tuberculous population, it is no greater than in the population as a whole.[1]

The etiology varies and includes trauma, diseased pleura or adjacent lung, tuberculosis, acute bacterial infections, neoplasms, pulmonary emphysema (both localized and diffuse), mediastinal emphysema, and the so-called "idiopathic" cases, in which no disease is demonstrable. The role of rupture of pleural, or sub-pleural, blebs or bullae, either congenital or acquired, was first described by Hayashi in 1915.[1] This cause accounts for about 80% of the cases of spontaneous pneumothorax, and it is this particular syndrome with which this discussion is specifically concerned.

The incidence of occurrence shows no predominance in either sex, and both sides of the chest are affected equally. Most cases occur in the third and fourth decade. Bilateral pneumothorax is not rare. Approximately 50% of the patients have greater than 50% collapse, and recurrent collapse varies from 16% to 30% in published reports. Vigorous physical exertion does not appear to predispose to, nor precipitate the pneumothorax, and so called "healthy" subjects are usually affected. Fatalities are not uncommon with simultaneous bilateral spontaneous pneumothorax, and severe, untreated, unilateral tension pneumothorax.[2]

Symptoms include sharp pleuritic chest pain (usually anterior), dyspnea, and non-productive cough. In general, the symptoms are more pronounced if the collapse is 50% or greater, but the extent of the collapse at the time of admission has no significant correlation with the duration of symptoms. The diagnosis may be confused with myocardial ischemia, dissecting aortic aneurysm, or spontaneous rupture of the esophagus.[3] Many rapidly fatal cases are misdiagnosed as heart disease.[2]

Complications of this condition include bloody pleural effusion, empyema, tension pneumothorax, residual atelectasis, and the failure to re-expand (the so-called "captive lung"), due to broncho-pleural fistula, pleural membrane, or fibrothorax. Recurrent collapse should be considered a major complication. In spite of the frequent complications, spontaneous pneumothorax is considered by many to be "benign".

In the management of spontaneous pneumothorax, several important questions must be considered before treatment is instituted. Is it an initial, uncomplicated episode? Is it a recurrent or complicated collapse, or both? Is it a chronic collapse with a pleural membrane? Is there known or demonstrable disease in the involved lung? Does the method selected offer the safest means of treatment with the least economic loss to the patient in terms of length of time hospitalized and time lost from work?

Methods of treatment include, singly and in combination, bed rest and restriction of activity, needle aspiration of air, closed thoracotomy, open thoracotomy, closed pneumolysis, pleurodesis, and a combination of thoracoscopy, poudrage, and intra-

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pleural suction. Bronchoscopy is a valuable additional therapeutic measure when there is delay in re-expansion due to a mucous plug.

With any method of treatment the primary aim is to restore cardio-respiratory physiology as quickly and safely as possible, and to return the patient to productive activity with a minimum loss of time. Rapid obliteration of the pneumothorax will also reduce the complications.

The expectant, or conservative, method of treatment embracing bed rest and restriction of activity usually results in long periods of disability. Kircher and Swartzel, by employing a formula utilizing the percentage of collapse and the hemi-thorax volume, have calculated the rate of re-expansion at 1.25% per day.[4] The conservative method of treatment may be considered the method of choice, and usually employed, if the pneumothorax is less than 20% and uncomplicated. However, if the degree of collapse is greater than 20%, successful treatment by this method, as reflected in published reports, imposes 22 to 47 days disability.[2] This prolonged disability, and frequent complications warrant the consideration of other forms of treatment in most patients.

Regarding open thoracotomy, it must be said that this method of treatment is certainly indicated for those cases that do not qualify for treatment by the method to be described, namely, those with giant or diffuse large bullae, pleural membranes, or well established broncho-pleural fistula. The other methods of treatment previously mentioned will not be discussed.

Hawkins, in 1948, first reported the successful use of thoracoscopy, poudrage, and intra-pleural suction in the treatment of spontaneous pneumothorax. This was followed by a report of ten cases by Kreutzer in 1952.[4] Since then, published reports reflect a re-expansion time of 24-48 hours, with disability ranging from 3 to 5 days.

In employing the thoracoscopy, poudrage, and intra-pleural suction method of treatment, it has become the practice to treat all cases with a diagnosis of spontaneous pneumothorax as surgical emergencies.

After confirming the clinical diagnosis of lung collapse by x-ray examination, the patient is taken to the operating room, having previously been given nembutal and demerol. Using local procaine anesthesia, a trochar and cannula are introduced into the pleural space through the 2nd, 3rd, or 4th intercostal space, either in the anterior or mid-axillary line. I prefer the 4th interspace in the anterior axillary line, as it permits a wider field of thoracoscopy and uniform distribution of the poudrage. The trochar is removed and the thoracoscope is withdrawn, and sterile talc is insufflated, by means of a long-stemmed powder blower, so as to thoroughly cover the pleural surfaces. A #16 or #18 F. red-rubber catheter is then inserted into the intra-pleural space through the cannula, and the cannula withdrawn. A Foley catheter is not used, because the balloon prevents approximation of the pleural surfaces. Active, under-water seal suction, at a negative pressure of 15-20 cm. of water is begun, and allowed to remain active for approximately 10 minutes before moving the patient from the operating room.

The patient is then returned to his room by-way of x-ray where a chest film is obtained. This usually shows re-expansion, or near re-expansion, of the lung. Active suction is maintained for 18 to 24 hours, and then simple under-water seal drainage is instituted and maintained for 24 hours longer. If the x-ray examination then shows the lung to remain re-expanded, the catheter is removed.

Pre-operatively, the chest films must be carefully studied for evidence of tuberculosis or other complicating pathology. In addition, at the time of thoracoscopy, the pleural surfaces must be carefully inspected for subpleural tubercles and other pathology. When complicating pathology is noted, poudrage should not be done. Thoracoscopy is a relatively benign procedure, which not only aids in determining the underlying pathology, but may permit the avoidance of an unnecessary thoracotomy.

It is not uncommon for a small amount of serous fluid to be withdrawn through the catheter. This represents a response to the irritating properties of the talc. Since it is withdrawn as rapidly as it forms, there is no development of an intrapleural fluid collection, and it is not necessary to do a thoracentesis following removal of the catheter.

There is need to introduce foreign material to stimulate an immediate inflammatory reaction and promote pleural symphysis. Such substances as fresh whole blood, hypertonic glucose solution, kaolin, turpentine, silver nitrate, asbestos, and magnesium silicate (talc) have been used. Silver nitrate and hypertonic glucose solutions are not desirable because they usually produce rather severe pain and a high febrile response. Asbestos may produce a marked granulomatous reaction. Talc, if pure, is less irritating and produces adequate pleural symphysis, with a low incidence of granuloma formation. At the time of discharge, patients receiving

talc show sharp costophrenic angles and the pleural reaction is usually not visible on chest x-ray film. Also, it has been shown by the follow-up studies of Knowles, Gorlin and others, that there is no loss of pulmonary function after talc poudrage.[5]

The intra-pleural suction should not exceed 20 cm. water. If the negative pressure is excessive, there may be alarming cardio-vascular-pulmonary signs and symptoms, due to the sudden shift of the displaced mediastinum to normal position.

It is advisable to give penicillin, or other antibiotic, during the period of catheter suction and drainage to prevent the complications of empyema.

The rapidity with which the ruptured blebs become sealed by removing the entrapped air and re-expanding the lung is the primary factor responsible for the high degree of success of this method of treatment.

The failure of this method of treatment is primarily due to the improper selection of cases, i.e., those not due to ruptured blebs, those with pleural membranes or well established broncho-pleural fistula, and those that developed empyema. It must also be kept in mind that this method of treatment is not immune to the danger of producing hemothorax, broncho-pleural fistula, empyema, or air embolus.

Bibliography

1. Du Bose, Price, & Guilfoil: Spontaneous Pneumothorax; Medical & Surgical Management. New England J. Med. 248: 752, April 30, 1953.
2. Marrangoni, Storey, & Geib: The Management of Spontaneous Pneumothorax. Am. Rev. Tbc. & Pulm. Dis. 72: 257, Sept. 1955.
3. Ehrenhaft, Taber, & Lawrence: Am. Rev. Tuberc. & Pulm. Dis. 72: 801, 1955.
4. Kircher & Swartzel: Spontaneous Pneumothorax. J.A.M.A. 155: 24, 1954.
5. Knowles, Gorlin, & Storey: Effects of Pleural Talc Poudrage on Pulmonary Function. J. Thor. Surg. 34: 250, Aug. 1957.

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Immunization Schedules for Adults

Immunization schedules for adults were outlined in the December 27 Journal of the American Medical Association.

Answering a query from a Michigan physician, one of the 900 physician consultants to the Journal said the "optimum intervals" for adult immunization, assuming that an adequate initial immunization series has been given, are as follows:

—Smallpox. Vaccination is needed every three years.

—Diphtheria. Immunization is not recommended for adults except in cases where the person shows no immunity after exposure to special risks.

—Tetanus. A booster dose should be given at the time of each injury where the danger of tetanus exists, with reinjection in the absence of an injury at intervals of no longer than five years.

—Typhoid. Reinforcing injections are necessary every three years.

—Influenza. Injections should be given every year to "risk cases," such as old or chronically ill persons.

—Poliomyelitis. Not enough time has elapsed yet to learn about the duration of protection conferred by the Salk vaccine, but a fourth dose, given not earlier than one year after the third dose, could be administered to individuals exposed to special risks.

The consultant noted that these are general guiding schedules which vary according to circumstances. For instance, for persons traveling to areas where smallpox is prevalent, revaccination at intervals as short as six months may be desirable. The same is true for persons living in areas where typhoid is common. They should get a booster dose every year.

A Symposium—Jaundice in the Newborn

I. Bilirubin Metabolism

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TWO FORMS of bilirubin were demonstrated by van den Bergh. His original reaction on normal plasma developed the color in an alcoholic medium in which both bilirubin and diazotizing reagent are soluble. He later found that bile would give the color without alcohol, and plasma from biliary obstruction would also give such a *direct* reaction. Plasma in hemolytic anemia required alcohol for color development and this reaction was termed *indirect*.

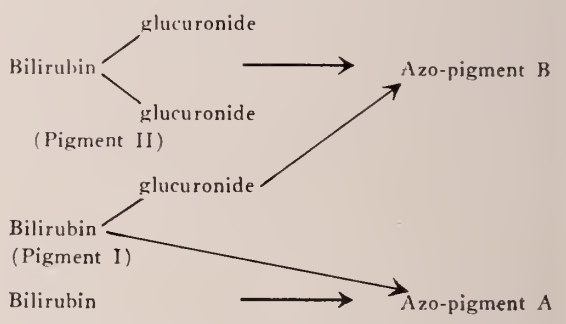
The liver obviously altered the indirect—reacting bilirubin so that it could be excreted into the bile as direct-reacting pigment. It was believed that the indirect bilirubin was protein-bound and that the liver split off the protein forming "free" bilirubin. The indirect reaction was attributed to alcohol breaking the protein linkage.

In 1953 Cole and Lathe showed by chromatography that neither direct nor indirect pigment contained protein. In 1956 Billing and Lathe in England, Schmid at the National Institutes of Health, and Talafant in Czechoslovakia found that the direct van den Bergh reaction was due to two closely related, fast moving water soluble fractions, pigment I and pigment II. The indirect reaction was due to bilirubin which was slower moving and fat soluble. Pigment II is dominant in bile; pigments I, II and bilirubin are present in the serum of regurgitation jaundice, while bilirubin is almost the only pigment in hemolytic anemia.

Editorial Note: This symposium was presented to the Medical Staff of the Mary Washington Hospital by the Department of Pediatrics (Drs. Grimes, Liddle and Painter) and the Department of Pathology (Dr. Barnett). It was decided to submit it for publication not only because of the intrinsic worth of the material in bringing the general physician current in a complex and vital field, but also to demonstrate again the feasibility of the scientific approach to medical practice in places distant from the towering centers. C.V.C.

When these pigments are treated with the coupling reagent, pigment II forms only azo-pigment B; bilirubin, azo-pigment A; and pigment I, azo-pigments A and B. Pigment II is a diglucuronide of bilirubin, and pigment I is a monoglucuronide. Since pigment I is a monoglucuronide it yields both azo-pigment A and azo-pigment B. (Fig. I)

FIGURE I



The liver appears to conjugate bilirubin with one or two molecules of glucuronic acid to form pigment I and pigment II. The change occurs in the hepatic cells mediated by an enzyme glucuronyl transferase.

In regurgitation jaundice there is a predominance of direct reacting pigment, although indirect-reacting pigment is also increased. That pigment I gives rise to both azo-pigments A and B would help explain this finding. Pigment I is higher in hepatitis and pigment II is higher in obstructive jaundice. Even in massive hepatic necrosis direct-reacting pigment is present, possibly because of extra-hepatic conjugation, the site of which is uncertain. In hemolytic anemia the reaction is indirect since the liver is not primarily involved. However, the presence of small quantities of pigments I and II suggests some degree of liver impairment.

The indirect van den Bergh reaction is due to the use of a medium, alcohol, in which both fat soluble bilirubin and aqueous coupling reagent are miscible.

Jaundice in the newborn and premature infant, in the absence of iso-immunization, is referred to as physiologic jaundice. The bilirubin is all indirect-

reacting, usually at low levels and need not be associated with excess bilirubin production. The liver of the jaundiced newborn has marked reduction in ability to conjugate bilirubin with glucuronate and it is postulated that physiologic jaundice is due to failure to conjugate and excrete bilirubin with a resultant increase in indirect-reacting pigment. The fall in bilirubin a week after birth is presumably due to the development of an efficient glucuronyl transferase system.

Hemolytic disease of the newborn combines excessive bilirubin production with deficient conjugation and excretion. The bilirubin, all indirect, may reach very high levels. Although obstructed adults may reach comparable total bilirubin levels the indirect fraction is relatively low since conjugation continues either in the liver or in extra-hepatic sites.

Congenital non-hemolytic hyperbilirubinemia may be due to an hereditary deficiency of glucuronyl transferase.

Kernicterus is directly related to the level of serum bilirubin. Cerebral staining usually does not occur below 20 mg. per 100 ml. serum. Brain tissue is not stained by conjugated bilirubin and it seems probable that it is the unconjugated fat soluble nature of the pigment that is largely responsible for kernicterus. Another factor is the greater permeability of the blood—brain barrier in infancy. Icteric spinal fluid is common in infants but in the adults only occurs at rather high, prolonged levels of bilirubin. Kernicterus is not seen in adults since indirect bilirubin is usually below the critical level and the blood-brain barrier may be less permeable.

Kernicterus is not confined to erythroblastotic infants but may be seen in newborn infants with marked hyperbilirubinemia due to defective conjugation and excretion of bilirubin.

References

Cole, P. G. and Lathe, G. H.: Separation of serum pigments giving direct and indirect van den Bergh reaction, J. Clin. Path. 6: 99-104, 1953.

Billing, B. H. and Lathe, G. H.: Bilirubin metabolism in jaundice, Am. J. Med. 24: 111-121, 1958.

Schmid, R.: Direct reacting bilirubin, bilirubin glucuronide, in serum, bile and urine, Science 124: 76-77, 1956.

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Health Insurance

In three out of every five American families, each member of the family is protected by health insurance, according to the Health Insurance Institute. This information was based on a nationwide consumer survey of health insurance, conducted by National Analysts, Philadelphia, Pa., just published by the Institute.

Of the nation's 55 million families, which includes persons who live alone, about 60%, or 33 million, have every member of the family with some form of health insurance. Another 13% have some but not all of their members insured. Thus, in 73% of American families, numbering 40 million, at least one member of the family has health insurance. In the other 27%, no member is insured.

The Institute survey shows that urban residents are more often insured than rural persons. Geographically, the Northeastern states lead the North-Central and Western states, and the Southern states in health insurance coverage.

Some 75% of urban persons have health insurance in contrast to 58% for those in rural areas. In 67% of urban families, all members have health insurance, and an additional 12% of families include at least one member with such protection, making a total of 79% of urban families with at least one member insured. Among rural families, 51% had all members insured and 13% were partially insured for a total of 64%.

One of the factors involved in the insurance coverage differences between urban and rural persons is the greater industrialization in city areas, and hence the greater availability of group insurance programs.

As a result of greater opportunity for industrial employment, some 56% of urban residents have group health insurance coverage as compared to 39% of rural persons. There is little difference, however, in the percentage of persons covered by individual policies as broken down into urban and rural residences. About 23% of urban residents have individual policies, as opposed to 21% of rural persons. Some persons, of course, have group and individual coverage.

Nationally, the number of Americans protected against the cost of hospital and doctor bills through insurance company programs, Blue Cross-Blue Shield and other health care plans, was estimated at 121 million at the end of 1958. Some 70% of the nation's population now have some form of health insurance coverage.

II. Clinical Manifestations And Evaluation

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IN EVALUATING JAUNDICE in the newborn we are confronted with a unique problem in that neonatal jaundice is a physiologic characteristic Virtually all infants have some elevation of serum bilirubin at birth, and as many as 50% of term babies, and an even higher percentage of prematures, will show clinical jaundice during the first week of life. The degree of apparent jaundice will depend on many factors such as the pigmentation and circulation of the skin, the light in which the infant is viewed, and the astuteness of the observer. There are probably several factors involved in the etiology of icterus neonatorum, including an excess of pigments derived from the breakdown of red cells which are no longer needed after birth, and the relative immaturity of the liver cells which impedes the normal elimination of these pigments.

Icterus neonatorum has been generally regarded as a completely benign condition, and for the most part this is true. Jaundice usually appears between the second and fourth days, and has begun to fade by the end of the first week. Some babies appear rather lethargic and may do poorly during the period of jaundice but as a rule there are no ill effects.

Nevertheless, we are concerned about the development of jaundice in a newborn because we now know that, whatever the cause of the jaundice, there is a critical level of serum bilirubin, (in the neighborhood of 20 mg.%), above which a large percentage of babies will develop kernicterus with resultant death or severe brain damage. It seems probable that it is the indirect bilirubin which is responsible for the development of kernicterus, but this remains to be proved. At any rate the correlation between the level of indirect bilirubin and the development of kernicterus seems unquestionable.

It has been found recently that some prematures develop kernicterus in association with, and presumably as a result of, physiologic jaundice. Also, the use of certain drugs in premature infants may aggravate the problem. Large doses of the vitamin K preparation, Synkavite®, appear to increase the hyperbilirubinemia of physiologic jaundice[1,2]. Vitamin K, of course, is an important drug in the management of prematures, but since a single injection of 1-2 mg. appears adequate to prevent hypoprothrombinemia, it would seem advisable to avoid larger doses. The use of sulfioxazole (Gantrisin®) in prematures appears to be associated with an increased incidence of kernicterus[3], even though it does not affect the serum bilirubin. Perhaps other drugs are capable of producing similar undesirable reactions, and we should bear this in mind when prescribing medication for prematures.

In attempting to decide whether jaundice in a given infant is normal or pathological, there are a number of factors to be considered. If, in association with the jaundice we find signs of severe anemia, hemorrhagic manifestations, or enlargement of the liver and spleen, we are obviously dealing with a sick baby and would set about to define the exact nature of the disease by appropriate laboratory studies. Often, however, we are confronted with a jaundiced baby and little or nothing else in the way of clinical signs. In this case, the time of appearance of jaundice is most important. Physiologic jaundice rarely appears before the second day of life, and therefore jaundice in the first 24 hours of life must be regarded as abnormal and demands immediate investigation. The great majority of infants showing obvious jaundice on the first day of life will prove to have erythroblastosis fetalis due to ABO or Rh incompatibility. Jaundice appearing later in the first week should certainly be followed closely by clinical observation, and if its intensity is more than slight, probably should be followed with serial determinations of the serum bilirubin.

References

1. Bund, J. P. and Telfer, T. P.: Lancet 1:720-722, May 19, 1956.
2. Meyer, T. C. and Angus, J.: Arch. Dis. Childhood 31: 212-215, June, 1956.
3. Silverman, W. A. et al.: Pediatrics 18: 614-625, October, 1956.

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III. Causes of Neonatal Jaundice

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PHYSIOLOGICAL JAUNDICE is the most common cause of neonatal jaundice. It is, to some degree, an exclusion diagnosis and herein lies its danger as a diagnostic pitfall. This condition has been well discussed above.

Hemolytic disease of the newborn, or as it is better known, *erythroblastosis fetalis,* is the disease to be considered first when a baby becomes icteric before the third day of life. Its presence is usually easy to determine by laboratory means but one should keep in mind that as many as five per cent of babies with this disease may have a negative Coomb's test. This condition will be discussed below.

Septicemia is one of the principal pathological causes of jaundice in the newborn. The liver and spleen are more often enlarged than not and hemolytic anemia may also be present in the more serious cases ("Winckel's disease"). Other common findings are poor feeding, listlessness, a persistent loss of weight or failure to gain, and a subnormal temperature. Fever may be found but hypothermia is more common, especially in the less mature infants. The infection may be acquired in utero from a maternal bacteremia or after prolonged premature rupture of the membranes. It may be acquired during the birth process or in early neonatal life through skin and mucous membrane abrasions, the umbilical stump, or a circumcision wound. It may also be acquired through the respiratory, digestive, or genitourinary tracts. The most often found causative bacteria are the staphylococcus, E. coli, and the streptococcus. Since other organisms, such as B. Proteus and Pseudomonas are also occasionally involved, one should not empirically begin treating a suspected septicemia until after blood cultures have been drawn since positive blood cultures are the only basis of a positive diagnosis. Since meningeal involvement is often present with a septicemia, examination of the cerebrospinal fluid is mandatory when a septicemia is suspected or has been proved to be present.

Obstruction of the biliary tract, whether intrahepatic or extrahepatic, may rarely cause jaundice in the first few days of life but jaundice resulting from mechanical obstruction more often appears later, or as an extention of icterus neonatorum.

Congenital syphilis may, along with other manifestations, first appear as jaundice and hepatosplenomegaly. We fortunately see little of this disease in the present newborn but we should always consider it in attempting to diagnose the cause of jaundice when erythroblastosis has been ruled out fully.

Generalized cytomegalic inclusion disease of the newborn is an uncommon disease and one which has been diagnosed before death only during the past few years.[1] The cells which are typical of the disease have been found at autopsy as an incidental finding in the salivary glands; disseminated throughout the body in children and some adults dying of various chronic diseases; and in newborn infants dying of the disease. The diagnosis during life depends on finding the cells in centrifuged specimens of body fluids such as the urine, gastric washings, or even in the aqueous humor from which also there has been grown on tissue culture a virus indistinguishable from the salivary-gland virus.[2] It is believed that the salivary-gland virus is the etiological agent in this disease. The clinical manifestations in the newborn infant consist of hemolytic anemia, jaundice, hepatosplenomegaly, and thrombocytopenic purpura. The diagnosis is best made by the finding of tubular epithelial cells with the characteristic inclusions in the urinary sediment. It should be emphasized that these cells may not appear early and it may take several days, and repeated examinations of the urine, before they are seen. Little is known concerning the treatment of this disease. Steroids have been used by several writers and cortisone was used in the treatment of the only case yet reported who recovered without sequelae.[3] In those who survive, cerebral calcifications are often present, together with evidence of severe cerebral damage.

Congenital Toxoplasmosis is another intrauterine infection which may be apparent at birth or after several days, manifesting with fever, maculopapular rash, jaundice, lymphadenopathy, hepatosplenomegaly, and central nervous system deformities. This disease may early terminate with the death of the baby or it may resolve leaving varying degrees of ocular or nervous system deformities.

Generalized herpes of the newborn, with or without herpetic lesions of the skin, is a very serious disease.

The mothers of affected infants usually have a concomitant herpes simplex infection and the babies, at birth, usually have skin petechiae, hepatosplenomegaly, and extreme toxicity.

Neonatal hepatitis, probably of viral origin, can be a cause of jaundice which appears shortly after birth. In many of these cases, giant cell transformation of the hepatic parenchyma occurs but similar hepatic changes are also present in 30% of cases of biliary atresia.[4]

Galactosemia rarely manifests as jaundice until after a week or so. This rare condition, a metabolic disease, is quite simple to treat if diagnosed early, and the diagnosis depends on finding a urinary sugar that causes a color change with Benedict's solution but proves not to be glucose on the fermentation tests.

Hereditary spherocytosis and *congenital nonspherocystic hemolytic anemia* are occasional causes of neonatal jaundice and the diagnosis of these is aided by a positive family history, a high index of suspicion, and appropriate laboratory studies. A presumptive diagnosis of both may be made by careful examination of blood smears.

Familial nonhemolytic jaundice, a condition which does not conform to the usual pattern of hepatocellular jaundice, is thought to result from inability of hepatic cells to metabolize and excrete bilirubin normally.[6] It may be a cause of neonatal jaundice, even severe enough to cause central nervous system damage.[5] The bilirubin may rise to as high as 40 mg./100 ml. Liver function tests are all normal except for bilirubin tolerance tests which show retention. Liver biopsies show some accumulation of bilirubin in bile canaliculi and periportal fibrosis.

Congenital thyrotoxicosis, in infants born of mothers who have been subjected to thyroidectomy for Grave's disease, has been the cause of jaundice, hepatosplenomegaly, and eventually death in two infants.[7]

In viewing this list of conditions, one notes that there are many causes of jaundice in the newborn. One also notes that most of these conditions are seldom seen but they should always be kept in mind while evaluating an icteric infant. Even after considering all of the conditions in this rather formidable list of possibilities, one is occasionally forced to diagnose a jaundiced infant as having "neonatal hyperbilirubinemia, cause not known", thus demonstrating to us further that we are still far from knowing all about the baby who is jaundiced.

References

1. Mercer, R. D., Luse, S., and Guyton, D. H.: Clinical Diagnosis of Generalized Cytomegalic Inclusion Disease. Pediatrics 11: 502-514, 1953.
2. Guyton, T. B., Ehrlich, F., Blanc, W. A., and Becker, M. H.: New Observations in Generalized Cytomegalic Inclusion Disease of the Newborn. New England J. of Med. 257: 803-807, 1957.
3. Birdsong, M., Smith, D. E., Mitchell, F. N., and Corey, J. H.: Generalized Cytomegalic Inclusion Disease in Newborn Infants. J.A.M.A. 162: 1305-1308, 1956.
4. 1956-1957 Year Book of Pediatrics, Ed. Gellis, S. S. Year Book Publishers, Chicago. Article comment, p. 203.
5. Rosenthal, I. M., Zimmerman, H. J., and Hardy, N.: Congenital Nonhemolytic Jaundice with Disease of the Central Nervous System. Pediatrics 18: 378-386, 1956.
6. Childs, B., and Najjar, V. A.: Familial Nonhemolytic Jaundice with Kernicterus. Pediatrics 18: 369-377, 1956.

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Heart Disease Research

Over 100 research programs devoted to heart disease have been supported during the year by the Life Insurance Medical Research Fund, according to the fund's annual report. Over $1,086,000 have been allocated to continue this support.

Research aided by the fund is concerned with all parts of the heart and blood vessels. In 1957-58 it was performed in 75 research centers widely distributed in the United States and Canada.

Progress in work on heart problems has been most encouraging. Investigators now have an attitude of confidence in their ultimate solution, whereas a few years ago the outlook seemed hopeless.

The fund also supported 22 research fellowships in 1957-58. These were held by young men and women in training for research in the heart field.

The fund is supported by 144 life insurance companies large and small. Its resources are devoted entirely to heart research. Since the fund's organization in 1945, over $10,300,000 has been contributed to this vital work.

IV. The Treatment of Hyperbilirubinemia at Mary Washington Hospital

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THE FIRST EXCHANGE TRANSFUSION was carried out at the Mary Washington Hospital on June 6, 1956, and since that time twenty-one other infants have been treated by this method. There were two deaths. One death resulted from a delay in diagnosing an Rh incompatibility in a 48-hour premature white female, and the other from giant cell hepatitis. Both infants were exchanged even though their clinical conditions were stormy. Following the exchange transfusion, both infants seemed to improve for a period of approximately 18 hours, but then expired. Each infant was autopsied.

There were twelve infants exchanged because of Rh incompatibility, four males and eight females, and there were seven infants exchanged because of hyperbilirubinemia due to ABO incompatibility, three males and four females. (See Table I). Those

Table I

Incompatability According to Race and Sex

Incompatability	Male		Female		Totals
	W	C	W	C	
Rh	4	0	8	0	12
ABO	2	1	1	3	7
"Others"	1	0	1	1	3
Totals	7	1	10	4	22

classified as "Others" constituted the above-mentioned giant cell hepatitis with hyperbilirubinemia, an infant with erythroblastosis due to the "C" factor, and a case of hyperbilirubinemia of undetermined etiology. The latter two were successfully treated by the exchange transfusion method.

Our criteria for the exchange transfusion are essentially a combination of clinical and laboratory findings.

1) A cord hemoglobin of 13 grams or less, or a capillary hemoglobin of 15 grams or less, with a positive Coomb's test.

2) A cord bilirubin of 5 mg. % or above calls for immediate care. Likewise, a rising serum bilirubin is a danger signal.

3) Any infant, 5 lbs. and 8 oz., or under, with a positive Coomb's and a rising serum bilirubin to 15 mg. % is an indication for an exchange transfusion.

4) A history of a previous sibling with jaundice or central nervous system involvement warrants immediate investigation.

5) A maternal anti-Rh antibody titer of 1:64 or greater during pregnancy, or with a rising titer, is an indication to be prepared for an exchange transfusion.

We feel that erythroblastosis can be managed successfully in a hospital of this size by using these criteria. We have not used new fresh blood as yet due to the lack of proper donors. However, our transfusions have been successful thus far by using properly typed Red Cross blood from the supply in our laboratory blood bank. We do attempt to use the latest dated blood possible, and, in all of our cases, blood under 72 hours old was used. Prior to starting the exchange transfusion, the blood is warmed, then draped in hot water bottles to maintain the warmth during the procedure. Three of our cases, we feel, would not have had time to wait for fresh donor blood because of their critical condition at birth.

From our small study, we recommend that a cord blood be drawn for a Coomb's test on all infants whose mothers did not receive prenatal care, and that a "jaundice card" be placed on the cribs of all newborn babies (Fig. 1)

The technique of exchange transfusion most commonly used in our hospital is the insertion of a #8 feeding tube into the umbilical vein. However, when it was not technically feasible to use the umbilical vein, the long saphenous vein was used in one infant, the femoral artery was used in another, and, in two others, the technique of making an incision just above the umbilicus and cannulizing the umbilical vein

FIGURE I

Name _____

Date of Birth _____ Hour _____

	Time	Jaundice	Stool	Urine
1st 24 hrs.				
2nd 24 hrs.				

"Jaundice Card"

was quite successful. Use of a 10 cc. syringe appears to keep the baby more comfortable during the exchange than a 20 cc. The post-exchange results have been just as satisfactory.

SUMMARY

1) The pathological, physiological, and differential diagnosis related to jaundice of the newborn is presented.

2) There have been twenty-two cases of hyperbilirubinemia treated by exchange transfusion at Mary Washington Hospital over a period of two years, with two deaths. One death resulted from erythroblastosis fetalis in a 48-hour premature white infant. This might have been prevented had there been prenatal data or at least a cord blood Coomb's test. The other death was due to hepatitis.

3) The use of the "jaundice card" has been helpful in detecting early jaundice.

4) The technique of a ventral approach to the umbilical vein is being used at this hospital when the usual cannulization of the umbilical vein is not technically possible.

5) Red Cross blood is being used successfully in our hospital.

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Men More Successful At Dieting

Men are more successful at losing weight than women, a new review of medical reports shows. Writing in the January Archives of Internal Medicine, published by the American Medical Association, Dr. Albert Stunkard and Mavis McLaren-Hume, M.S., said, "Sex of the patients has not, to our knowledge, been previously suggested as a possible factor in the success of efforts at weight reduction. We were, therefore, surprised to discover that whenever results of treatment have been reported according to sex of the patient, men have been shown to be more successful than women."

In three separate studies "a far higher percentage of men than women were able to achieve the modest success of a 20-pound weight loss." The discrepancy between the results of treatment for men and for women is even more pronounced if 40 pounds is considered as a criterion of success. At least three other possible criteria for predicting success have been suggested. They are the presence of the "night-eating syndrome," in which the patient eats at night; the outcome of previous attempts at dieting, and the amount of anxiety in the patient.

The authors found in a review of the literature and in a study of 100 patients at New York Hospital that none of these had any validity as indications of success at weight reduction.

"In recent years the ill effects ascribed to excessive body weight have received wide attention, as have the benefits to be achieved by weight reduction. As a result many physicians and their patients, who had formerly looked upon weight reduction as a cosmetic conceit, have come to consider it a therapeutic imperative. A variety of lay institutions, notably the magazines for women, has seized upon this growing interest in weight reduction and has helped to magnify it to the proportions of a national neurosis."

When treatment for obesity is undertaken, it must be conducted by a qualified physician and not by nonmedical persons.

Dr. Stunkard is a psychiatrist at the University of Pennsylvania School of Medicine, who has extensively studied the problems of obesity treatment. Miss McLaren-Hume is a member of the staff of the department of nutrition at the New York Hospital.

An Appeal to Reason

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THE PROBLEM of automotive mayhem has been forcefully presented to the general public through the various media of newspapers, radio, and television and in more technical terms to the members of the medical profession by additional scientific reports. At the risk of being repetitious and even pedigogical, I wish to present the results of a major tragedy along with some observations which I feel pertinent to future prevention of such occurrences.



Figure 1
—Rockbridge County News

On January 4, 1957, a Scenicruiser Greyhound Bus, complete with driver and forty-two passengers crashed head-on into the rear of a large trailer-truck loaded with cast iron pipe. Three passengers and the driver apparently died instantly. Two more died on admission to local hospitals. The seventh died less than seventy-two hours later of multiple injuries. The remaining thirty-six passengers were given emergency treatment with the exception of four who denied receipt of any injury. Sixteen of these required hospitalization with their length of stay ranging from one to one hundred fifty-nine days with a total period of four hundred fifty-one patient days.

Thus a total of thirty-eight of the passengers sustained injuries, or 88.37% for the bus as a whole, a mortality rate of 16.27% and a morbidity of 88.88% for those surviving.

A total of one hundred twenty-six separate injuries was suffered by all and these have been catagorized into seven major areas or regions (see chart B). The detailed injury and its magnitude cannot be described with any adequacy due to the limited scope of this report and so although each was studied thoroughly, it has been recorded here only by notation of the region of injury with additional reflection in the resultant morbidity or mortality. Study of the types of injuries sustained and the apparent causative mechanisms has proved not only interesting but informative in the conclusions drawn. These serve further to substantiate the recommendations noted later relative to safety measures concerning all vehicles now using our highways. Many of these injured have now recovered completely (thirteen months later) but several still require medical care and rehabilitation and a few will never recover completely.

The severity and degree of injury sustained in this case are partially reflected by the seating arrangement of the passengers (see chart A). As one

CHART 'A'

CODE: O = INJURIES SUSTAINED
DOA = DEAD ON ARRIVAL
SUT = STILL UNDER TREATMENT

BUS SEATING ARRANGEMENT L → R

43: 1	42: 7 RE	41: AR 2	40: 1
39: 1	38: 3	37: 2	36: 3
35: 2	34: 2	33: 3	32: 1
31: 3	30: 5	29: 1	28: 1
27: 2	26: NO INJURY	25: NO INJURY	24: 3
23: 1	22: NO INJURY	21: 2	20: 2
19: NO INJURY	18: 1	17: 3	16: 1
15: 5	14: NO INJURY	13: 2	12: 1
11: 8 SUT	10: VACANT	REST	ROOM
9: 5 SUT	8: 2 DOA	7: 8 SUT	6: 13 D-3 DAYS
5: 4	4: 2 DOA / 3: 1 DOA	2: 3 DOA	1: 5 DOA

UPPER DECK AISLE
LOWER DECK AISLE
STEPS
ENTRANCE

RIGHT — FRONT — LEFT

PATIENT NUMBER IN UPPER LEFT CORNER OF SEAT

11 DRIVER (DOA)

readily observes, those on the lower deck were crushed by direct contact with the pipe-laden trailer, but

CHART 'B'

Patient Number	Head and Face	Cervical Spine	Thorax	Abdomen and Pelvis	Spine (Except Cervical)	Upper Extremity	Lower Extremity	Immediate Course	Present Status After 1 Year
1	1	1		1			2	DOA	—
2	1	1	1					DOA	—
3		1						DOA	—
4	2							DOA	—
5	3						1	H-30 D	Recovered
6	5		1			2	6	D- 3 D	—
7	5			1			3	H-159 D	SUT
8			1	1				DOA	—
9	2				1		2	H-51 D	SUT
10	Vacant	V	V	V	V	V	V	V	V
11	2		1		1	1	3	H-103 D	SUT
12	1							ETD	Recovered
13	1						1	ETD	R
14	No Injury							ETD	R
15	4	1						H-10 D	R
16	1							ETD	R
17		1			1		1	H- 8 D	R
18	1							H- 1 D	R
19	No Injury							ETD	R
20	1			1				ETD	R
21	2							ETD	R
22	No Injury							ETD	R
23	1							ETD	R
24	2	1						H-41 D	R
25	No Injury							No Rx	R
26	No Injury							ETD	R
27	1		1					H- 4 D	R
28	1							ETD	R
29				1				H- 3 D	R
30	3				1	1		H- 7 D	R
31	3							H-10 D	R
32	1							ETD	R
33	2						1	ETD	R
34						1	1	ETD	R
35						1	1	ETD	R
36	3							H-13 D	R
37							2	H- 1 D	R
38	3							ETD	R
39							1	ETD	R
40	1							ETD	R
41	1				1			ETD	R
42	1		2			2	2	H- 7 D	R
43	1							ETD	R
Driver	2	1	1	1		3	4	DOA→	7 Dead
Total Patients	30	7	7	6	5	7	15→	38 Patients Injured	
Total Injuries	58	7	8	6	5	11	31→	126 Injuries Sus.	

CODE: DOA = Dead on Arrival H = Hospitalized SUT = Still Under Treatment
ETD = Examined, Treated and Discharged

with the omission of those killed as a result of direct forces we have left thirty-two others who sustained a total of eighty-eight injuries. If one further analyzes the charts, it will be apparent that the vast majority of these could have been prevented or at least greatly minimized by the use of two simple measures: namely, seat belts and crash pads affixed to the back of each seat. In practically every case, injury was sustained as a result of being thrown from the seat into the aisle or against the rear of the seat directly in front. One can further postulate that with the use of such safety measures others who died might have survived even though sustaining serious injuries not preventable in their entirety.

Braunstein et. al[1] in their well documented studies have demonstrated graphically the value of such safety measures in automotive design especially with reference to the seat belt. Where these were used, there was a sixty per cent range of improvement in injuries observed.

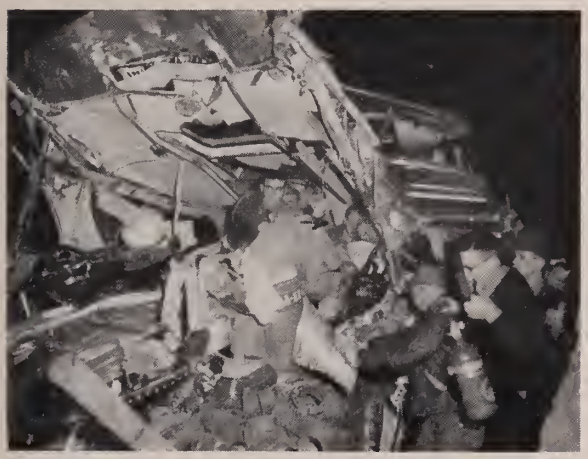
Thus, if these percentages can be translated into terms of those derived from the accident described,



—Waynesboro News-Virginian

Figure 2

one finds that approximately nineteen of the thirty-two passengers who suffered non-fatal injuries would have escaped with less severe and possibly minimal trauma and five of those killed might have escaped with serious but nevertheless non-fatal injury. Statistics relative to injuries of the head and face are of additional special interest since they comprise such a large percentage of the total injuries received; namely fifty-eight of the one hundred twenty-six. In this region in particular, the use of crash pads and seat belts are almost totally protective.



—Rockbridge County News

Figure 3

These statistics are startling and compelling and refusal to heed their message must weigh on the conscience of those who know but disregard them. The time to bring about wide-spread use of safety measures is NOW and the need is urgent. If the public could know completely the causes of this needless loss of life and years of subsequent suffering they would demand preventive measures. Automotive designers, engineers and manufacturers must be convinced of their responsibility in this campaign and if necessary required by law to make available as standard equipment basic safety features in every vehicle. This certainly could be carried out in the common carriers where on the spot supervision is available at all times. It is quite true that enforcement of the use of safety features by the individual will prove more difficult but this can be improved through properly designed legislation. Evidence of non-utilization of these features by anyone involved in an accident should bring about forfeiture of his driving permit. In this way, both manufacturer and consumer would profit from the lives saved by preventative laws. Is this any different in nature from our public health laws and existing traffic laws? I think not, and I further believe that the general public would accept them once it understood the benefits inherent in such laws.

An excellent beginning has been made through the work of committees of dedicated members of the medical profession working with receptive representatives of the automobile manufacturers. The anti-



—Waynesboro News-Virginian

Figure 4

bodies of safety are known. Recognition of safety features and the desirability of their employment by others while refusing to face-up to one's own deficiencies and laxity will no longer suffice. We have the means and the duty to our fellowman to explain

their value and then convince them to make full use of all their benefits.

REFERENCE

1. Braunstein, P. W., Moore, J. O., and Wade, P. A.: Preliminary Findings of The Effect of Automobile Safety Design On Injury Patterns. Surg. Gynec. & Obst. 105: 257-263, 1957.

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Heredity in Multiple Sclerosis

A hereditary factor was termed "a distinct possibility" as a cause of multiple sclerosis after a new study of twins suffering from the disease. Heredity has long been considered as possibly playing a role in multiple sclerosis, a disease of the central nervous system.

A preliminary report of the study—one of the first conducted among twins and their relatives—was made by two Chicago scientists in the December Archives of Neurology and Psychiatry, published by the American Medical Association.

The study involved 63 sets of twins, of whom 54 sets were completely studied and nine of whom are still being studied. They were selected through the National Multiple Sclerosis Society who advertised for twins in whom at least one had multiple sclerosis.

The study showed that among identical twins, there were two sets in whom both members definitely had the disease; five sets in whom it appeared that both had the disease, and 22 sets in whom only one twin had the disease.

Among the non-identical twins, there was one set in whom both twins had the disease; three in whom it appeared that both had the disease, and 21 in whom only one twin had it.

Using "the most rigid diagnostic standards," both members of only three sets definitely had multiple sclerosis; however, with less rigid standards, 11 sets could be considered as having "concordant" disease. They noted that it is sometimes difficult to tell definitely if a nervous disorder is multiple sclerosis, and that there are cases in which the disease process "burns out" before it presents the standard symptoms.

It is possible that more concordant cases may appear in future years, since there is great variability in the age of onset of disease. In addition, the partial symptoms presented by many of the twins "will probably flower into the full clinical picture in many of them, while others now quite free may come to show the full-blown disease."

It seems most unlikely that multiple sclerosis is of purely genetic origin. "There must be more than one cause if genetic factors play any role at all. Thus it is possible that a genetic factor may require the addition of an environmental agent before the disease can develop. Concordance in identical twins may thus fail to develop because one of the pair has not yet encountered the unknown environmental factor necessary to produce the disease."

Studies of more than one thousand relatives of these twins showed a prevalence of the disease ranging from 20 to 33 times that found in the general population. This finding—similar to those of other studies—"strongly suggests a genetic factor as one agent in the causation of multiple sclerosis," and makes the "equivocal genetic evidence" disclosed in the study of twins less equivocal and more favorable to the genetic hypothesis.

"Follow-up studies of these twins and their relatives, planned for 5 and 10 years from now, will either confirm our predictions or modify our conclusions to more final ones."

The authors are Roland P. Mackay, M.D., and Ntinos C. Myrianthopoulos, Ph.D., both of the University of Illinois College of Medicine.

Mental Health . . . .

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Classical vs. Reactive Schizophrenia

Among the earliest students of the Schizophrenic psychosis there arose a question as to whether Schizophrenia was a single disease entity or not. While the end product of the disease, the symptoms, were similar enough, the course and onset of the disease was often so dissimilar as to raise the question of existence of several diseases with similar symptoms but different predisposing and precipitating factors.

Out of this confusion arose two schools of thought. One school supported by Kraepelin's work of the early 1900's held firm to the opinion that schizophrenia was a single disease entity whereas the works of Meyer in 1906 and 1910 held to the view that schizophrenia was an abnormal reaction to experiences rather than a disease entity.

Existence of this dichotomy was supported by the work of Langfeldt published in 1951. He did a six to ten year follow up of 100 cases diagnosed as "typical" schizophrenia wherein the classical symptom complex was exhibited, and a group of "doubtful" schizophrenics wherein schizophrenic symptoms were shown, but deviations from the classical picture were sufficient to raise doubt as to whether these patients exhibited a schizophrenic disease or a reactive state. The follow-up indicated not only considerable differences as to various etiologic and symptomatologic factors, but a wide and statistically significant difference as to prognosis in the two groups in favor of the "doubtful" schizophrenics.

The two groups proved to have the following differences: the classical schizophrenic, i.e., poor prognosis case, was typified by a shy, unduly seclusive childhood with few outside interests and little desire for contact with others. Aspirations were low and onset was insidious with affective reactions lacking or at an extreme minimum and with prominent disturbance of thought on admission to the hospital.

The doubtful, or reactive schizophrenic exhibited a normal childhood without undue seclusion or destructive unruliness. He was a happy, bright child and interest in people was not diminished. This group exhibited intense and over-compensatory aspirations and onset was acute with hyperemotional reactions and lack of prominent thought disturbances upon admission.

The prime interest of this present study was to ascertain the nature of differences in the way these two groups consciously viewed themselves and how they reacted to frustration. A developmental theory was set up drawing from the work of Arieti, which in this author's eyes offered a rationale for the different roads of psychological development indicated by the classical schizophrenic and the reactive schizophrenic. Postulates based upon this theory were tested.

Briefly, Arieti's theory states that at least two types of premorbid personality types exist in schizophrenics. In the schizoid type which this author feels resembles the classical schizophrenic, the child very early in life accepts a picture of himself as a bad child and withdraws from contact with others to preserve what little acceptance of himself that he has left. As he grows he is forced to withdraw more and more because he doesn't mature to begin with and he has to deny even more strongly the criticisms of the environment. In this case there is not much regard for the environment and if the patient wants to think of himself as Napoleon or God to make himself feel powerful he can. He enters the state hospital not because there is an acute breakdown of his psychological defenses but because they are working too well. He becomes more and more removed from reality and he appears "queer" and is hospitalized. Because his defenses do not break down there is none of the turmoil and agitation typical of the reactive group which break under strong pressure.

The stormy personality which is akin to the reactive schizophrenic, in childhood exhibits a different pattern than the schizoid. Rather than accept the notion of himself as a bad or unacceptable child he tries to change and to please the environment. As he grows he becomes a chameleon changing his personality with the situation he meets.

He seems to have many friends for he merges with every group he meets.

The problem with this person is that he never

LIPSCHITZ, FRED, *Psychologist, Southside Area Mental Hygiene Clinic, Petersburg, Virginia.*

Approved for publication by Commissioner, Dept. Mental Hygiene and Hospitals.

develops a sound, consistent personality and rather than deny the environment as the schizoid does, he denies himself. Under pressure this defense breaks down and for once the individual is faced with his lack of consistency and a turmoil develops.

Postulates based upon the two personality pictures described above were tested as follows: Two groups of functional schizophrenics, (25 subjects in each group) were selected by three psychologists who rated case histories independently. Selection depended upon complete agreement by all three judges and statistics demonstrated a significant ability for these judges to agree upon the criteria used for selection. Groups were matched for intelligence, age, length of hospital stay and were all first admissions between 20 and 45 years of age with no demonstrable CNS lesions.

Paper and pencil tests were used to determine what the patients thought of themselves, what they would wish to be like, and how they felt about the kind of people they were. In addition, their reactions to frustration were also determined through use of paper and pencil tests.

Results indicated that the reactive group, in keeping with their desire to please the environment, demonstrated a significantly stronger need to better themselves and to structure a highly idealized self image than the classical group.

There was no significant difference between the two groups in degree of accepting the way they were, though there was a tendency for the reactive group to be more accepting of self.

In reaction to frustration, the classical group was typically "floored" by the frustration and showed no behavior designed to cope with it. Instead, they would insistently point it out with no positively oriented behavior. This is understandable in light of their usual reaction of withdrawing from the problems of the environment. The reactive group, on the other hand, exhibited a significant orientation towards coping with the frustration, a good reason for their better prognosis.

This being "floored" by the frustrating object with no adequate coping mechanisms in the classical schizophrenic may well account for the symptoms of CNS damage (perserveration, "stickiness", concretism, etc.) so often seen in the schizophrenic.

Among other findings, it is indicative that in the author's experience as well as others he has spoken to, reactive schizophrenics comprise approximately one third of the total schizophrenic population in any hospital. As recovery rates run about one third of hospital populations, it may well be that the reactive cases account for the released-as-cured statistics and that the classical cases are incurable by present standards. This bears further investigation.

Potato Caloric Value

Thin potato peelings have always been the sign —and the aim—of an economical housewife.

But there may be at least one situation when a thick peel is desirable, according to Dr. William W. Bolton, associate editor of Today's Health, an American Medical Association publication.

In answer to an overweight, potato-loving reader asking how potatoes can be prepared so they will be less weight-building, Dr. Bolton said the starch that provides most of a potato's caloric value is near the skin. Thus he recommended that the skin be cut away in a thick peel.

He added, however, "We cannot give you any assurance that caloric intake will be greatly reduced, but at least it would be lowered some. . . ."

He also recommended that cream sauces be avoided and that butter and margarine be kept to a minimum. And baked potatoes are "surely off limits."

Dr. Bolton noted that potatoes are not just starch. An average-sized potato provides 85 calories and has a water content of 77.8 per cent. Vitamins A and C are present in appreciable amounts as are calcium and phosphorus. There are trace amounts of iron and vitamin B fractions.

His comments appeared in the December Today's Health.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

The New York State Journal of Medicine recently published a series of articles about Blue Shield which were written by Louis H. Bauer, M.D., the Chairman of the Board of the New York City Plan. The last of the series, with Dr. Bauer's permission, is reprinted below; it explains why Blue Shield warrants the exclusive loyalty of the medical profession, why enlightened self-interest attests that the profession should support only its own community-oriented Blue Shield program. Dr. Bauer has a most distinguished background, one which lends credence to the accuracy of his observations. He has been active in Blue Shield development, not only in New York City, but nationally, too. He has been Chairman of the Medical Service Committee, Chairman of the Board of Trustees, and President (1952-53) of the American Medical Association. Since 1948 he has been Secretary-General of the World Medical Association. While devotedly serving organized medicine, Dr. Bauer somehow finds time to serve patients; a fellow of the American College of Physicians, Dr. Bauer is the consulting cardiologist for five hospitals in Nassau County.

R. J. A.

The Future of Blue Shield

LOUIS H. BAUER, M.D.
New York, New York

Consider the structure of Blue Shield: It was devised primarily to take care of the low-income groups. It did this by combining the higher risk of illness of low-income groups with medium-income groups having a lower illness rate. An average or community illness rate was the result, and both income groups were charged an identical premium, a premium both could easily afford.

To keep this rate from rising now, Blue Shield must maintain an average enrollment of healthy and unhealthy persons. It must continue to attract persons from all walks of life and with average and above-average health as well as persons who are poor health risks. This is the philosophy that participating physicians in Blue Shield originated and continue to support.

But what happens when Blue Shield allegiance is shared with a private insurance company or a closed panel? Remember that private insurers do not try to insure the unhealthy. They are interested primarily in large groups with excellent health experiences. Therefore, they can offer insurance at a lower premium. As a result they attract from Blue Shield the very good health population Blue Shield needs in order to survive. The above explains why the problem cannot be turned over to the private insurance companies as some doctors advise. To meet the needs of the public, one must provide a community plan. Many private companies also cancel policies for age or frequent utilization, which Blue Shield does not.

Next, consider a union's clinic or a medical panel. A union will of necessity devote its money toward protecting its active members. This leaves the retired, the aged, the unemployed, and many dependents out of union plans. These people are also the poor health risks. They are thrown onto the community to seek care wherever they can. The only place they can find prepayment protection is in Blue Shield. If, however, Blue Shield is put in a position where it must continually take in poor risks without at the same time balancing that intake with healthier persons, then Blue Shield rates must soar, and eventually they will rise so high that the persons who need protection most will not be able to pay for it. They will look elsewhere for care, and they will get that care from charity, the doctors, or the government. The opportune moment for which the politicians are always looking will have arrived.

If, in other words, this double-sided game is continued to be played by means of supporting one plan on Monday and a second on Tuesday, the doc-

tors' own plan, Blue Shield, will disappear from the scene and the doctor will find himself under the complete control of agencies over which he has no influence. It requires little imagination to see that if Blue Shield fails, compulsory health insurance will follow swiftly.

This foolish competition in which doctors are now engaged is a clear indication of the disunity that is the present sad characteristic of the American medical profession. It is a disunity that bears a frightening resemblance to the lack of harmony that prevailed in foreign countries that saw government medicine swept in. Only in countries where the physicians have remained united have voluntary methods and traditional practices been retained.

Blue Shield could insure against all kinds of medical expense, but doctors must be realistic enough to know that the premium may be so high as to price it out of the market. To obtain what is desired may require some sacrifice on the doctor's part. The alternative to sacrifice now may be a system in the future that will resemble England's, with its doctor income governed by politicians.

If the doctors desire a fee-for-service, free choice of doctor plan and want it to compete successfully with other plans, then they had better stand directly behind their own plan, control it, and see that it meets the needs of the community and not just a favored few. Competition usually affords stimulation, often progress, but one does not compete against oneself. In the last analysis, we are all competing against government-run medicine, and we need united strength because the enemy is formidable.

We cannot win the battle by fighting each other or by frittering away our strength in independent groups working at cross purposes.

Food Supplements Unnecessary During Pregnancy

Expectant mothers generally do not have to resort to food supplements to obtain all the vitamins, minerals, and other nutrients needed during pregnancy.

These nutritional essentials are readily available from normal food sources, according to three Vanderbilt University researchers. Their conclusions are based on a study of 2,388 pregnant women and are reported in the December 20 Journal of the American Medical Association.

As a result of their study, William J. McGanity, M.D., Edwin B. Bridgforth, A.B., and William J. Darby, M.D., all of Nashville, Tenn., questioned the wide use of food supplements in the diets of expectant mothers. Their study indicates no significant difference in the incidence of maternal or fetal abnomalities in women receiving supplements and those on a standard diet. The only exception was among women with iron deficiency anemia. These women generally need supplementary iron.

If a doctor feels his patient is not obtaining the necessary amounts of minerals or vitamins he should recommend dietary corrections before resorting to supplements. Such supplementation should be used only to bring the patient up to accepted nutritional levels.

Their study does not provide evidence to indicate that dietary intakes greater than the allowances of the Food and Nutrition Board of the National Research Council, Washington, will bestow protective benefits during pregnancy.

"A diet that will provide the recommended levels of nutrients is readily attainable from food sources in all sections of the country without the need of supplementation."

Public Health . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Staphylococcal Infections in Hospitals

The problem of staphylococcal infections in hospitals is as old as the hospitals themselves. A new development is antibiotic resistance on the part of the organisms with resulting specific epidemic strains which threaten both hospital populations and communities at large. It is only within the past few years that infections of this type have become a problem of national, even international, significance. Our colleagues in Great Britain, Canada, and Australia were the first to isolate antibiotic strains in hospital populations, to demonstrate epidemiologic patterns of hospital-acquired staphylococcal disease, and to develop bacteriophage typing as a new tool in staphylococcal research.

In February 1956, a Symposium on Staphylococcal Infections was sponsored by the New York Academy of Science. Shortly after this, epidemiologic studies began to be reported in this country showing nationwide prevalence of resistant strains in hospital populations and spread of such infections to local communities. In October 1957, the State and Territorial Health Officers Association recommended that the Public Health Service seek funds to expand its technical assistance to the states to deal with their respective staphylococcal problems. In November, 1957, the American Medical Association and the American Public Health Association sponsored independent meetings on successive days—the former to consider the problems of staphylococcal infections in hospitals, with recommendations for both hospital and community action, while the latter group concentrated on the epidemiology. In December of the same year, the American Hospital Association appointed a Committee on Infections Within Hospitals. Early in 1958, the American Academy of Pediatrics issued a supplement calling for special attention to staphylococcal infections to its standards for management of premature and newborn nurseries. In May 1958, the Committee on Infections Within Hospitals, the newly appointed committee of the American Hospital Association, after consultation with the Joint Committee on Accreditation of Hospitals and the United States Public Health Service, issued a bulletin recommending action in hospitals and local communities to combat staphylococcal infections. In September 1958, the Public Health Service—Communicable Disease Center and the National Academy of Sciences—National Research Council sponsored a National Conference on Hospital-Acquired Disease. As a result of this conference, Regional Conferences and, in turn, State and Local Conferences have been held to develop practical plans and to stimulate action to control staphylococcal infections. The State Department of Health held such a conference on November 10, 1958.

It is the duty of every health agency, every hospital, every profession having any power in this connection to unite to halt the invasion of hospital-acquired staphylococcal disease. The routes of infection are numerous and often obscure, the precautions needed are many and often difficult. Our preventive measures must be directed toward minimizing the endemic level, preventing the development of epidemics, and terminating epidemics when they occur.

This is partially a man-made problem. Practically all the staphylococci responsible for epidemics are resistant to penicillin and most are resistant to other antibiotics as well. Resistance probably develops by selection of resistant mutants through exposure to drugs. Once resistant, they are selectively retained in the environment through continued exposure to the antibiotics. Thought has been given to the possibility that the resistant strains may have been resistant from the beginning and that destruction of non-resistant forms may have allowed resistant ones to grow in abundance. Effective control must be based on an understanding of the epidemiology of the disease. The relative importance of the carrier vs environmental sources in the transmission and maintenance of staphylococcal disease within the hospital is an issue which is being vigorously debated by epidemiologists. It is becoming clear that both sources are important. Transmission of antibiotic-resistant strains directly to patients may be responsible for endemic disease and for the initiation of an epidemic situation through mass contamination of a number of patients or of the environment, or of both.

There are three places within the hospital to which special attention must be directed: the newborn nurseries, the surgical services, and the general medical services. These will be considered in order.

Staphylococcal Infections in Newborn Nurseries. Crowding conditions in most nurseries lead to an increased ratio of personnel to units of space and cause undue proximity of bassinets. Furthermore, it appears that newborns are more susceptible to bacterial colonization of the nasal mucosa and that later, after the decline of the passive immunity they have acquired from their mothers, they become more susceptible to infection. The principal staphylococcal infections among newborns have been conjunctivitis and pyoderma. When milder manifestations increase, more serious infections, such as breast abscess, cellulitis, pneumonia, empyema, septicemia, and osteomyelitis, begin to appear in the nursery populations. Breast abscesses in infants are unusual except in epidemics of staphylococcal infections. The high rate of colonization during the first week of life can be curbed by rigid aseptic techniques, routine bathing with a detergent containing hexachlorophene, and sending the infant home by the third day (when advisable) before colonization takes place. The long latent period without manifestation of disease has serious public health implications because of dissemination from hospital to community of antibiotic-resistant strains. It is necessary to carry on surveillance of mothers and infants after they leave the hospital to determine the development of staphylococcal disease.

Good hygienic practices, such as proper handwashing, control of dust and lint, the handling of garments, bed clothes, and surgical dressings, deportment of personnel with respect to coughing, laughing, touching face and nose, use of cloth handkerchiefs, proper use of gowns and masks, influence the amount of dissemination of staphylococci to patients and from infected patients to other patients and personnel. Mothers are practically never the source of these organisms acquired by their infants.

We should try to identify by nasopharyngeal culture all carriers of strains known in our community to be pathogenic for newborn infants before assigning an individual to duty in the maternity service. Surveys should be made monthly thereafter. Carriers of "hot" strains should be removed from the nursery.

(*To be continued*)

Ref.: Hospital-Acquired Staphylococcal Disease. Proceedings of the National Conference, September 1958, sponsored by the U. S. Public Health Service and the National Academy of Sciences.

Monthly Report of Bureau of Communicable Disease Control

	Dec. 1958	Dec. 1957	Jan.-Dec. 1958	Jan.-Dec. 1957
Brucellosis	0	0	22	22
Diphtheria	2	2	33	22
Hepatitis	23	16	286	426
Measles	569	213	22,420	5,226
Meningococcal Infections	7	14	94	84
Meningitis (Other)	14	14	269	420
Poliomyelitis	15	4	159	107
Rabies (In Animals)	11	16	252	318
Rocky Mt. Spotted Fever	0	0	32	31
Streptococcal Infections	661	457	7,105	6,850
Tularemia	3	5	35	36
Typhoid Fever	1	0	42	42

"Profile" of Average Physician

What's the average doctor like? From the results of its study, "Patterns" (Prepared by Parke, Davis & Company) has assembled a composite "profile" of him. He is 44 years old, 5 feet 10 inches tall and weighs 173 pounds. He works 54 hours a week, plays seven hours, and takes two-and-a-half weeks' vacation a year. His health record, at least in terms of his working schedule, is a good one. He only lost a fraction of a day from work last year, and has had one illness in the past five years.

Woman's Auxiliary....

President	Mrs. Charles A. Easley, Danville
President-Elect	Mrs. Walter A. Porter, Hillsville
Vice-Presidents	Mrs. George K. Brooks, Richmond
	Mrs. James M. Moss, Alexandria
	Mrs. W. A. Eskridge, Parksley
Recording Secretary	Mrs. Robert B. Keeling, South Hill
Corresponding Secretary	Mrs. J. J. Neal, Danville
Treasurer	Mrs. Wyndham B. Blanton, Richmond
Publication Chairman	Mrs. Custis L. Coleman, Richmond
Directors	Mrs. J. R. St. George, Portsmouth
	Mrs. Lee S. Liggan, Irvington
	Mrs. Maynard Emlaw, Richmond

Annual Meeting.

The thirty sixth annual meeting of the Woman's Auxiliary to The Medical Society of Virginia convened in the Flemish Room, Hotel Jefferson, Richmond, on October 14, 1958, with Mrs. John R. St. George of Portsmouth, presiding.

The meeting was called to order by Mrs. St. George. The Invocation was given by Mrs. Hawes Campbell after which the pledge of Loyalty to the Woman's Auxiliary to the American Medical Association was said in unison.

The Address of Welcome was given by Mrs. William Grigg, Jr., President of the Woman's Auxiliary to the Richmond Academy of Medicine. Mrs. Kalford W. Howard of Portsmouth gave the Response.

The roll was called by the secretary. There were 19 officers and committee chairmen present. Representatives from the County Auxiliaries were:

Alexandria	2	Old Belt	2
Alleghany Bath	1	Petersburg	0
Arlington	4	Portsmouth	2
Danville-Pittsylvania	2	Richmond	15
Fairfax	0	Rockingham	1
Hopewell	0	Smyth	1
Lynchburg	0	Southwestern	8
Mid-Tidewater	0	Tazewell	0
Norfolk	6	Tri-County	3
Northampton-Accomac	3	Warwick-Newport News	2
Northern Neck	7	Wise	0

Motion was made, seconded and carried that the reading of the minutes of the 1957 Convention be dispensed with and that they be accepted as approved by the Reading Committee appointed at the 1957 Pre-Convention Board Meeting.

Mrs. St. George introduced Mr. Robert Howard, Executive Secretary of The Medical Society of Virginia who presented Dr. Harry C. Bates, Jr., President. Dr. Bates brought greetings from the Medical Society and thanks for the splendid job done by the Auxiliary.

Mrs. Lee S. Liggan conducted a most impressive In Memorium service for Mrs. W. G. Parsel, Mrs. James Baetou and Mrs. Meade Edmunds. Mrs. St. George complimented the County Presidents for the Exhibit set up at the Convention. The Officers and Committee Chairmen were asked to stand and be recognized for their work during the past year.

A rising vote of thanks was given Mrs. St. George for outstanding leadership as President of the Auxiliary.

Mrs. Wyndham B. Blanton, Jr., Treasurer, reported a balance on hand of $1,176.46. Mrs. Maynard R. Emlaw gave the Courtesy Resolutions.

Mrs. Kalford W. Howard, Chairman of the Finance Committee, presented the proposed budget for 1958-59. A motion was made, seconded and carried that the Budget be accepted.

Mrs. A. B. Gravatt, Chairman of the Nomination Committee, presented the following slate of officers for 1958-59.

President-Elect—Mrs. Walter A. Porter
1st Vice President—Mrs. George K. Brooks
2nd Vice President—Mrs. W. A. Eskridge
Recording Secretary—Mrs. Robert D. Keeling
Corresponding Secretary—Mrs. J. J. Neal
Treasurer—Mrs. Wyndham B. Blanton, Jr.
Directors—Mrs. John R. St. George
Mrs. Lee S. Liggan
Mrs. Maynard R. Emlaw

By motion, the ballot was accepted as presented.

Mrs. Paul Erdman, representative of the Crippled Children's Hospital in Richmond, thanked the Auxiliary for their contribution to the Hospital during the past year.

Mrs. William F. Grigg, Jr., Mrs. Sheppard Ames and Mrs. James M. Moss gave reports of the Annual Convention of the Auxiliary to the American Medical Association held in San Francisco, California, June 23-27.

Mrs. St. George introduced our guest speakers. Mrs. Walder L. Curtis, President of the Woman's Auxiliary to the Southern Medical Association spoke on "A Silhouette of the Doctor's Wife". Mrs. Arthur Underwood, President of the Woman's Auxiliary to the American Medical Association spoke on "Fidelity to the Duty of the Day".

The meeting was recessed at 11:15 a.m. to recon-

vene at 12:30 p.m. for the Inaugural Luncheon at the Commonwealth Club.

Mrs. Hawes Campbell gave the Invocation.

Mrs. E. A. Underwood installed the officers for 1958-59.

The President's pin and gavel were presented to Mrs. Charles Easley by Mrs. John R. St. George.

Mrs. Lee S. Liggan presented Mrs. St. George the Past-President's pin.

A beautiful Fashion Show was staged by Montaldo's.

The meeting was declared adjourned at 2:30 p.m.

ALMA R. GRINELS
Recording Secretary.

Vitamin Supplements

Vitamin supplementation is unnecessary for normal persons following an adequate diet, according to the American Medical Association's Council on Foods and Nutrition. "Vitamins are essential nutrients, and their usual source is food," the council said in a report in the January 3 A.M.A. Journal. All the nutrients essential to the maintenance of health in the normal individual are supplied by an adequate diet—one that meets the Recommended Dietary Allowances developed by the Food and Nutrition Board of the National Research Council. These recommended levels of nutrients are believed to be adequate for maintaining good nutrition throughout life and supplementation by vitamin preparations is in most instances unnecessary.

It criticized certain nutritional surveys which have indicated that "a variable fraction of certain segments of the population" is not receiving sufficient varieties of foods to supply the necessary vitamins. Commenting on the surveys, the council said "generalization of these findings as a basis for vitamin supplementation of healthy individuals is not rational. The methodology employed in these surveys and the standards used for interpretation have varied considerably. It is necessary for the physicians to evaluate each person individually."

The council agreed, however, that there are some situations where vitamin supplementation is both necessary and desirable.

For instance, it may be useful "during periods of illness or a deranged mode of life which may result in impairment of absorption of nutrients or deterioration of dietary quality." It may be of value to the individual who "through ignorance, poor eating habits, or emotional or physical illness does not eat an adequate diet." For these patients, the physician's primary responsibility is to try to remove the disturbing factor. Until this can be done, supplementary vitamins are valuable in assuring an adequate intake.

The council noted that infants should receive supplements of vitamins C and D if their diets do not supply 30 milligrams of vitamin C and 400 U.S.P. units of vitamin D, the recommended daily amounts.

Healthy children fed adequate amounts of wholesome foods need no supplemental vitamins except vitamin D. Even here, vitamin preparations are unnecessary, since the vitamin D can be obtained by drinking vitamin D-fortified homogenized milk.

Adults who must follow restricted diets because of an illness, such as diabetes or stomach ulcer, may need specific vitamin supplementation. The character of the supplementation will depend on the diet, the nutrients given, and the length of time the routine must be maintained.

In addition, healthy persons may benefit from supplementary vitamins at certain special periods of life, such as during pregnancy and lactation.

Concerning multivitamin combinations, such preparations should contain only those vitamins shown to be essential in human nutrition or metabolism. The unit quantities of vitamins included in mixtures should furnish no more than those amounts necessary to fulfill the Recommended Daily Allowances.

The physician should be careful that his recommendations are not increased in amount and that his patients do not follow the precept that greater concentrations of vitamins are justified in light of the little additional cost.

It is not true that "if a little is good, more would be better." In fact, an overdosage of vitamins A or D can be harmful.

There is no good reason for the inclusion of minerals with vitamins, except perhaps in the case of iron and calcium. These would then be used in such situations as pregnancy or lactation.

In conclusion, "public health will be served best by insistence on a factual basis for vitamin supplementation and therapy. It is sound judgment to emphasize repeatedly that properly selected diets are the primary basis for good nutrition."

President's Message . . . .

BY THE TIME you receive this Monthly the New Year will be well under way. Don't be complacent about the year 1959. This is a changing age. Unless we physicians guide changes they may not turn out to the satisfaction of our patients and practice.

Many unsolved problems need thought and guidance by physicians, and not by others having various motives. New problems arise daily. We know too well those connected with hospital insurance plans, old age medicine, third party medicine, social security for physicians, Medicare, the special disease lay societies, and AMEF collection. These are only a few.

Now is the time for each of us to lend a hand to our Society Committees and their Chairmen. They have already been meeting and planning. Most of us are not on committees, but committee problems are nevertheless ours. They are part and parcel of our Annual Meeting. Each one of us must have some thought as well as some experience in these many questions. Your ideas should not die. New approaches can often change or solve a problem. Your plan of approach to many such matters could help a committee in its report and thereby aid your Society greatly.

This is a call for action now in these matters. Committee Chairmen will appreciate your ideas and let you know what action can be forthcoming. Address our Secretary if the Chairman's name and address are not known to you. Do this now. In this way you can participate in and help your Society.

With continued best wishes throughout the New Year.

Walter O. Adams

President

Editorial . . . .

Winter-time Hazards of the Aged

WE TOWN DWELLERS have now reached the season when the city fathers remind us that local ordinances require the removal of snow from the front pavement within a certain number of hours after it has fallen or a penalty will be forthcoming. This, no doubt, is all very right and proper but a postscript should be added to the effect that this task should not be undertaken by the aged or by those known to have heart disease.

All too often the sequence of events fall into a familiar pattern. An elderly pensioner, frequently living with a son or daughter, feels that the least he can do to justify his presence is to clear the sidewalk and this he undertakes with vigor. The worker usually is bundled up with excess clothing which restricts his movements, increases his labor and serves as a larger target for the brisk wind which often accompanies the snow. The dry crisp air is exhilarating. Every shovelful of snow he removes leaves a bare spot that gives a sense of accomplishment unlike that experienced in other forms of human endeavor. It is far more satisfying than bailing out a boat and each shovelful leads to another.

All of this sets the stage for a coronary occlusion or more likely an attack of congestive heart failure. The moral is evident: snow removal, like war, is a young man's game and should not be attempted by the aged and infirm.

Another hazard these pneumonia-prone citizens are subject to arises from their conscientious attendance at winter-time funerals. Cemeteries are usually located on bleak and wind-swept hillsides. The health of these elderly people is at its lowest ebb during the winter months. The frequent demise of their friends give them ample opportunities to attend these melancholy functions under the most unfavorable climatic conditions. A well attended funeral during the first cold spell in the fall may start a chain reaction which will carry far into the spring.

If we could persuade these fragile old men to keep their hats on in wintry weather it would lessen the morbidity resulting from such exposure. If we could dissuade them from attending funerals altogether it would be even more sensible.

H. J. W.

Society Proceedings . . . .

Roanoke Academy of Medicine.

The regular monthly meeting of the Academy was held on December 1st. This was a dinner meeting held at the Hotel Roanoke. Dr. Leighton E. Cluff, Associate Professor of Medicine of Johns Hopkins University was guest speaker. His subject was The Syndrome of Chronic Brucellosis.

Dr. Alexander McCausland is president of the Academy and Dr. R. F. Bondurant, secretary-treasurer.

The Lynchburg Academy of Medicine

Held its regular meeting on December 8th. Mr. J. L. Davidson addressed the Academy on the importance of the United Fund and its failure to reach its campaign goal.

The Academy voted to conduct a poll of all Virginia physicians as to whether or not they are in favor of physician participation in Social Security. Details of this poll are to be worked out by a special committee.

Following the business meeting, a movie on Diagnosis and Treatment of Hyperparathyroidism was shown.

Southwestern Virginia Medical Society.

The Spring Semi-Annual meeting of this Society will be held in Marion on April 16th.

Halifax County Medical Society.

Dr. George Lee Wilkinson, South Boston, has been elected president of this Society. Dr. Warren C. Hagood, Clover, was named vice-president, and Dr. Lucien D. Roberts, South Boston, secretary-treasurer. Dr. William R. Watkins, South Boston, is the retiring president.

Fairfax County Medical Society.

Dr. Thomas O'Brien was installed as president of this Society on January 13th. Dr. Carl P. Parker, Jr., is president-elect; Dr. Peter Soyster, vice-president; Dr. John Prominski, secretary; and Dr. Frances Ayres, treasurer. All officers are from Falls Church.

Dr. T. B. McCord, Fairfax, and Dr. Robert O'Donnell, Culmore, have been named members at large of the executive committee.

Dr. Thomas Haggerty, Falls Church, is the retiring president.

Medical Society of Northern Virginia.

The regular meeting of this Society was held on December 9th at the Virginia Gentlemen Restaurant in Front Royal. Dr. Fred Maphis, Strasburg, president, presided.

Case reports were presented as follows: C.P.C. for Abdominal Lesion by Drs. E. B. Sherman and W. C. Humphries; Gas Gangrene by Dr. Dennis P. McCarty; and Pregnancy Complicated by Disseminated Lupus Erythematosis by Dr. W. A. Gergen. The guest speaker was Dr. John P. Adams, chief of service in Orthopedic Surgery of the George Washington University Hospital, Washington, D. C. His subject was Common Orthopedic Problems in Children Involving the Lower Extremities.

Dr. George Waterman, Woodford, was elected president; Dr. Bradford Bennett, Winchester, vice-president; and Dr. Dennis P. McCarty, Front Royal, re-elected secretary-treasurer.

Williamsburg-James City Medical Society.

At the meeting of this Society on December 10th, Dr. and Mrs. W. Linwood Ball, Richmond, were guests of honor. Dr. Ball is a delegate to the American Medical Association from The Medical Society of Virginia and was recently elected vice-president and a member of the Board of Trustees of the American Medical Association.

Virginia Society of Pathology.

Dr. Robert J. Faulconer, Norfolk, has been installed as president of this Society. Dr. David E. Smith, Charlottesville, is president-elect, and Dr. George J. Carroll, Suffolk, secretary-treasurer. Dr. John W. Hooker, Danville, has been reappointed as delegate to the Council of the American College of Pathology.

Arlington County Medical Society.

Dr. Stephen J. Sheeny was installed as president of this Society at the January meeting. Dr. Robert L. Norment is president-elect; Dr. Michael A. Puzak, vice-president; Dr. Howard O. Mott, secretary; and Dr. James H. Stallings, treasurer. Dr. Thomas A. Gavin, who was the 1958 president, has been named as member-at-large.

News Notes....

New Members.

Since the list published in the January issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Leslie P. Gondor, M.D., Alexandria
Frank F. Merker, M.D., Roanoke
William M. Trible, M.D., Arlington

Committee of Arrangements.

The Roanoke Academy of Medicine announces the following appointments for the local committee on arrangements for the annual meeting of The Medical Society of Virginia in Roanoke, October 4-7, 1959:

General Chairman—Robert S. Hutcheson, Jr., M.D.
Scientific Exhibits—Michael J. Moore, M.D.
Technical Exhibits—Richard H. Fisher, M.D.
Entertainment—Houston L. Bell, M.D.
Hotels and Halls—Peter A. Wallenborn, M.D.
Press and Publicity—Charles A. Hefner, M.D.
Golf—Harry Yates, M.D.
Woman's Auxiliary—Mrs. William Kaufman.

Erratum.

The article by Dr. Harry Pariser on The Use of Triamcinolone (Aristocort) in Dermatology, published in the December 1958 issue of the Monthly, contains an error in punctuation. On page 647, line 11, this sentence was broken into two separate clauses, one of which does not make a complete sentence. It should read "When good initial suppressive effect was obtained, further involution was noted even though the dose was further reduced."

The J. Shelton Horsley Award

For outstanding work in cancer control in Virginia has been presented to Dr. Alfred P. Jones of Roanoke. This is the eleventh time the award has been given. It was presented during a meeting of the Board of Directors meeting of the Virginia Division of the American Cancer Society. Dr. Jones is a member of the staff of Jefferson Hospital and has long been active in cancer control. He is a former president of the Virginia Division of the Cancer Society.

Dr. Pendleton Honored.

The citizens of Louisa County have dedicated a picnic area in honor of Dr. E. Barbour Pendleton, the county's oldest practicing physician. The area is called "Pendleton Wayside", and is on U. S. Route 33. It fronts 350 feet on the highway and extends 100 feet into the surrounding woods. Trees, shrubs and a stone marker and plaque have been placed there.

Hospital Staff Appointments.

Dr. Benjamin W. Rawles, Jr., has been elected chief of staff at Richmond Memorial Hospital, succeeding Dr. Henry W. Decker. Vice chief of staff is Dr. Meyer Vitsky and secretary is Dr. Fleming W. Gill. New division chiefs are: Dr. William Young, general practice; Dr. Emmett Mathews, medicine; Dr. W. Hughes Evans, obstetrics and gynecology; Dr. W. M. Monroe, pathology; Dr. Donald P. King, radiology; Dr. Rawles, surgery. Chiefs of services are: Dr. T. W. Murrell, Jr., dermatology; Dr. James B. Black, internal medicine; Dr. George K. Brooks, Jr., neuropsychiatry; Dr. H. T. Dougan, pediatrics; Dr. Thomas Walker, anesthesiology; Dr. S. E. Bear, oral surgery; Dr. John S. Archer, otorhinolaryngology; Dr. B. H. Martin, Jr., ophthalmology; and Dr. Frank P. Coleman, general surgery.

Dr. Charles A. Hudson is president of the Alexandria Hospital Medical Staff, succeeding Dr. Adrian J. Delaney. Dr. George Speck is president-elect, and Dr. James D. Mills, secretary-treasurer. Drs. Charles Amole, John Watson and Thistle McKee have been named to the executive committee. Dr. S. H. Williams has been elected chief of the department of medicine; Dr. Robert H. Anderson chief of the department of pediatrics; Dr. Carson Lee Fifer chief of the surgical service, with Dr. Herbert D. Wolff, Jr., as vice chief; and Dr. Harrison Picot chief of obstetrics and gynecology.

Dr. William P. Frazer, Hamilton, has been elected chief of staff of the Loudoun Hospital, succeeding Dr. Joseph M. Rogers. Dr. Keith M. Oliver, Purcellville, is vice chief and Dr. Earl E. Virts, Jr., Leesburg, secretary.

Dr. R. L. Brickhouse has been elected president of the Virginia Baptist Hospital, Lynchburg; Dr. Earl T. Owen, vice president, and Dr. Edwin B. Vaden, secretary. Others named to the executive committee are Drs. H. L. Riley, Jr., John C. Risher, L. R. O'Brian, Jr., J. E. Warren, L. M. Howard, Jr., and T. W. Stewart.

Dr. Andrew Shapiro has been installed as president of the Jefferson Hospital board of directors, Roanoke, succeeding Dr. A. M. McCausland. Dr. William Tice is vice president and Dr. Lee Shaffer secretary-treasurer. Dr. Charles Peterson is a three-year director.

Dr. Thomas Jennings has been elected president of the Bedford County Memorial Hospital, succeeding Dr. Glenn Hardy. Dr. Jesse M. Tucker, Jr., is vice-president and Dr. Dennis H. Robinson, secretary.

The Annual Clinical Conference

Of the Louise Obici Memorial Hospital, Suffolk, will be held on March 4th. The program is as follows: Oral Manifestations of Endocrine Dysfunction and Certain Metabolic Diseases by Dr. Harold M. Syrop, Associate Professor of Oral Diagnosis, Medical College of Virginia; The Management of Dehydration by Dr. T. Franklin Williams, Assistant Professor of Medicine and Preventive Medicine, The University of North Carolina; The Management of Vascular Disease—Panel Discussion with Dr. David Hume, Professor of Surgery, Medical College of Virginia, as moderator, and Dr. Gerald Pratt, Attending Surgeon, Chief Cardiovascular Service, Department of Surgery, St. Vincents Hospital, and Associate Clinical Professor of Surgery, New York University College of Medicine; Dr. Andrew Prandoni, George Washington University School of Medicine, Washington; and Dr. F. Bernheim, Professor of Pharmacology, Duke University, School of Medicine. At the evening session, the dinner speaker will be Colonel Carl F. Tessmer, Chief of Radiological Injury, Radio-biology Section, Armed Forces Institute of Pathology. His subject will be Late Effects of Radiation.

Further information may be secured from Dr. George J. Carroll, Suffolk, who is chairman of the Program Committee.

Heart Fund Campaign.

As medical science continues to open doors on the mysteries of the causes and possible cures for diseases of the heart and circulatory system, the Virginia Heart Association and its affiliates are preparing to launch their annual Heart Fund campaign to finance programs of heart research, lay and professional education, and community service.

This campaign, under the leadership of Major General John T. Sprague (U. S. Air Force, Ret.), 1959 Heart Fund Campaign Chairman, will be conducted during February—Heart Month.

Figures compiled by the Virginia Bureau of Vital Statistics show that there were 32,994 deaths in Virginia in 1957. Of this number, 17,038 or 51.64 per cent of all deaths were caused by diseases of the heart and circulatory system.

In 1957, the latest year for which total national figures have been compiled, more than 877,000 Americans died of heart and blood vessel diseases. Close to 246,000 of these victims were in the most productive years of their lives—less than 65 years old.

While the heart diseases are still the leading cause of death in the United States, great progress has been made in the past several years in controlling many heart ailments. We are witnessing impressive benefits from the research, education, and community service programs of the Heart Association. Medical scientists, aided by Heart Association research grants, have created remarkable new techniques for performing heart-saving surgery, devised new tools for accurately diagnosing heart and blood vessel disorders, and developed new methods for treating and controlling the heart diseases more effectively.

Physicians have been kept informed of research progress through American Heart Association publications, through teaching materials and through scientific meetings. And, in cities and towns throughout the nation, they have applied this new knowledge for the benefit of all patients.

Since 1950, Virginia Heart Association and its chapters have spent $308,937.11 in research and medical education fellowships. Of this amount, $70,862.60 was spent at the University of Virginia School of Medicine, $63,793.22, at the Medical College of Virginia, and $174,281.29 was pooled with American Heart dollars in the support of research at various other institutions throughout the United States. Research anywhere helps hearts everywhere.

In the past 10 years, more than 32 million Heart Funds dollars, contributed throughout the United

States, have been channeled into cardiovascular research.

Without these coordinated efforts of the public and medical science, so much progress could never have been made in so short a time. With the help of the Heart Fund, this partnership will produce even greater advances in the years to come.

Dr. Leta J. White,

Formerly of Petersburg, is now located in Gaffney, South Carolina, for the practice of pediatrics. In August, 1957, she went to Nigeria for six weeks work at the Baptist Mission Hospitals. Soon after arriving, she received an urgent invitation to remain for a year due to the terrific shortage of doctors. She worked in a number of the mission hospitals in Nigeria and also visited Presbyterian Mission Hospitals in the Belgian Congo and Dr. Schweitzer's Hospital in French Equatorial Africa.

Dr. Bradford Retires.

Dr. Kenneth Bradford, Staunton, retired from active practice the first of December. In addition to his private practice for more than fifty years, he served for years as health officer and gave his services to many free clinics. An editorial in The Staunton Leader stated: "He has nobly exemplified the high principles of his profession, of citizenship and churchmanship, and his hundreds of friends and admirers unite in best wishes for many years of happiness in his home and in travel to see his children and grandchildren and parts of America and perhaps of the world for which he has had all too little time."

American Congress of Physical Medicine and Rehabilitation.

The 37th annual scientific and clinical session of the Congress will be held August 30-September 4, 1959, inclusive, at the Hotel Leamington, Minneapolis. All sessions will be open to members of the medical profession in good standing with the American Medical Association and/or state or county medical association.

Full information may be obtained from the Executive Secretary, Dorothea C. Augustin, 30 North Michigan Avenue, Chicago 2, Illinois.

American College of Allergists.

The graduate instructional course and annual congress will be held March 15-20, at the Mark Hopkins Hotel, San Francisco. Further information may be obtained from Dr. John D. Gillaspie, treasurer, 2049 Broadway, Boulder, Colorado.

Licensure Examination for Physical Therapists.

The Virginia Board of Medical Examiners has scheduled the next examination for physical therapists for February 14th. The examination will be held at the Medical College of Virginia, 3rd floor Memorial Hall, and will begin promptly at 8:30 A.M.

Candidates must make application to the Board prior to sitting for the examination. For further information, write State Board of Medical Examiner, 631 First Street, Southwest, Roanoke, Virginia.

Wanted.

Young male psychiatrist, Diplomate or Board eligible. To direct privately operated out-patient clinic. Salary $16,000 to $18,000, plus commission factor. Write #600, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

Current Currents

THE PROGRAM COMMITTEE has recently requested those members wishing to present papers during the 1959 Annual Meeting (Roanoke, October 4-7) to submit 100 word abstracts by March 15. Abstracts may be sent directly to the State Office.

THE DOCTOR DRAFT ACT, with its amendment for calling up physicians under age 35, will expire next June 30. It is expected that the Department of Defense will ask Congress to extend the regular draft and the physician amendment. Although the Doctor Draft has not been invoked during the past two years, the Defense Department believes it will be needed next year.

PRESIDENT EISENHOWER will soon name a committee of educators and representatives of the professions, labor, management, finance "and every other kind of useful activity" to set long range goals for the nation. According to the President, the committee will be concerned with living standards, health and education and better assurance of life and liberty. The committee will also attempt to point out methods to meet such goals, and to indicate which levels of government—local, state or federal —should assume responsibility.

The President, in his State of the Union Message, said that such a committee could "effectively participate in making the necessary appraisal of the potentials of our future. The result would be established national goals that would not only reflect the brightness of our finest dreams, but would meet the stern tests of practicality."

THE WORLD'S POPULATION increased by 47,000,000 during 1958, according to a report by the Population Reference Bureau. This growth exceeds the total population of all New England states, plus those of New York, New Jersey, Pennsylvania and Maryland. The Bureau reports that if the present birth rate continues, the world population in 1980 will be more than four billion. It is anticipated that a great percentage will then be living in what are now known as underdeveloped countries.

THE LATEST HILL-BURTON REPORT from the Washington Office of the AMA indicates that three new Virginia projects, totalling $1,778,400 were approved during December. It also shows that 73 projects, supplying 2,793 beds at a total cost of $52,-916,052 have been completed. Twenty-four projects are under construction and ten others will soon be started.

THE 85 MEDICAL SCHOOLS in the United States are the well-spring from which all attack on disease, and all solutions of health problems come. Not only do they furnish us with physicians, trained workers and medical scientists, but they also carry on a majority of the research activities that have contributed to great advances in medical knowledge so apparent in our time. This is what our medical schools do today:

TEACH 29,334 undergraduate medical students, of whom approximately 7,000 will graduate.

INSTRUCT 62,964 other students—that is, interns, residents, practicing physicians, research scientists and dental, pharmacy and nursing students.

SERVE approximately 37,000 family doctors, health officers, hospital staff members, specialists and other practitioners through short courses.

PROVIDE 2,400,000 men, women and children with free medical care valued at $120,000,000, through associated teaching hospitals and clinics.

CONDUCT research projects costing more than $60 million for corporations, governmental agencies, hospitals and foundations—plus the basic research financed by teaching budgets.

MAINTAIN a steady flow of new health and medical knowledge through books, pamphlets, professional journals, magazines and news services.

FURNISH, through their faculty members, leadership and guidance for thousands of health agencies, organizations, and foundations.

Plan now to contribute to the AMEF during 1959.

THE FAILURE OF ALMOST SIXTY PER CENT of our population to secure Salk vaccine has alarmed our nation's medical leaders, and a recent conference was held in Washington to study the problem. The conference, attended by officials from many national medical groups, praised the recommendations recently adopted by the AMA House of Delegates. The House recommended that (1) each physician assume responsibility for making sure that all members of families he sees are fully vaccinated; (2) state medical societies work with state health departments to bring county and local medical societies together with health departments to work out vaccination programs; (3) county medical societies meet with local health departments to make surveys of local problems and devise ways to meet local situations.

Obituaries . . . .

Dr. Lewis Conrad McNeer,

Prominent physician of Bristol, died December 10th. He was on a business trip to Clintwood and suffered a heart attack, dying almost instantly. Dr. McNeer was eighty years of age and graduated from the former Maryland Medical College in 1904. He practiced in Dante before locating in Bristol in 1942. Dr. McNeer was considered one of the area's best known businessmen. In addition to the practice of general medicine and surgery, he was active in several business operations. He was on the staff of the Bristol Memorial Hospital and was an Elk, a Mason and a member of the Kiwanis Club. Dr. McNeer was a Life Member of The Medical Society of Virginia, having joined in 1911.

His wife, three children and six grandchildren survive him.

Dr. Howson Wallace Blanton,

Well-known Richmond physician, died December 12th following a heart attack. He was sixty-six years of age and a graduate of Columbia University College of Physicians and Surgeons in 1917. Dr. Blanton had practiced in Richmond since 1920. He was associate professor of medicine at the Medical College of Virginia. Dr. Blanton was past president of the Hampden-Sydney College alumni association, a mmber of the Society of the Cincinnati and the Society of Colonial Wars. He had been a member of The Medical Society of Virginia for thirty-eight years.

Dr. Blanton is survived by his wife and a daughter. A brother is Dr. Wyndham B. Blanton.

Dr. John Gill Holland,

Lynchburg, died December 24th. He was fifty-six years of age and received his medical degree from the University of Tennessee in 1932. Dr. Holland was an eye, ear, nose and throat specialist. He was a veteran of World War II, a Mason and member of the Kiwanis Club. At the time of his death, Dr. Holland was president-elect of the Lynchburg Academy of Medicine and was on the staffs of the Virginia Baptist, Lynchburg, and Memorial Hospitals. He had been a member of The Medical Society of Virginia for seventeen years.

His wife and a son survive him.

Dr. John Franklin Williams,

Formerly of Richmond, died December 25th in Marion. He was fifty-eight years of age and a graduate of the Medical College of Virginia in 1942. Dr. Williams was a member of the staff of Southwestern State Hospital in Marion. He was a member of The Medical Society of Virginia, having joined in 1944.

His wife, three daughters and a son survive him.

Dr. Charles Loren Ransom,

Danville, died in an automobile accident on December 14th. It is believed he fell asleep and ran off the road, death being attributed to a broken neck. He was thirty-eight years of age and graduated from the State University of New York, College of Medicine, in 1945. He had been in Danville for five years and was associated in the practice of surgery and urology with Dr. Ralph Landes. Dr. Ransom was recently appointed to the faculty of the Bowman Gray School of Medicine in Winston-Salem. He was a member of The Medical Society of Virginia.

His wife and three children survive him.

Dr. Cockrell.

Dr. Loren Eugene Cockrell, prominent physician of Reedville, Northumberland County, for fifty-nine years, was born at "Melville", home of his parents Lyttleton and Agnes Harcum Cockrell, in Northumberland County, May 5, 1870. He died November 15, 1957, at the home of his daughter, in his eighty-eighth year.

Dr. Cockrell attended Randolph Macon College and received his medical degree from the University of Maryland in 1894. After a year as clinical assistant at the medical school he returned to Northumberland County in 1895 and began his practice of medicine in Reedville.

On July 12, 1899, he married Miss Nettie Lindsay Gates of Richmond, whose death occurred on November 4, 1952. To them were born seven children, five sons and two daughters.

Dr. Cockrell was a charter member of the Northern Neck Medical Association, member of the American Medical Association, Southern Medical Association and The Medical Society of Virginia.

In spite of a practice which extended over a large area, Dr. Cockrell was keenly interested in many civic and religious affairs of the community.

He served for a number of years on the County School Board, County Board of Health and from 1914 to 1954 as Assistant Surgeon of the United States Public Health Service. At the time of his death, he still served as a

Steward in Bethany Methodist Church, Reedville.

At a meeting of the Northern Neck Medical Association held at Tides Inn, Irvington, on October 23, 1958, the Association wishing to express tribute to the memory of their late associate, Dr. Loren E. Cockrell, the following resolutions were read and unanimously adopted:

WHEREAS, God in His infinite wisdom has removed from our midst a sincere friend and loyal colleague, who faithfully served his community and State,

BE IT RESOLVED that in the death of Dr. Cockrell, the profession has lost a valued associate and the community a useful and esteemed citizen.

BE IT FURTHER RESOLVED that these resolutions be spread on the minutes of the Northern Neck Medical Association, and a copy sent to the family, and to the Virginia Medical Monthly for publication.

Dr. Kyle

WHEREAS Almighty God in His Infinite Wisdom didst removed from our midst our loyal friend and co-worker in the Art of Healing, Bernard H. Kyle, M.D., August 22, 1958. The Lynchburg Academy of Medicine requests that the following resolutions be spread upon the minutes of its meeting and that a copy be sent to his family and to the Virginia Medical Monthly.

BE IT THEREFORE RESOLVED that the Lynchburg Academy of Medicine, the surrounding community, the City of Lynchburg. The Medical Society of Virginia, and his friends, have lost a valuable member of strong character, evidenced by his high ideals, devotion to duty, and his strict moral and ethical standards.

BE IT FURTHER KNOWN that during his professional career he rendered valuable services to the physicians, patients, and hospitals of this community.

He was a pioneer in this community in his specialty as an orthopaedic surgeon, and was largely responsible for raising this specialty to its present high level.

He also rendered distinguished services to his country in active combat with the Second Division during World War I, receiving several decorations. And in World War II, he took an active part in this community, rendering valuable services.

BE IT FURTHER RESOLVED that we, the members of the Lynchburg Academy of Medicine, miss him deeply, and extend to his wife, child, and family, our sincere and deepest sympathy, but that we feel that Divine Providence has supervened and taken unto Itself our beloved friend and co-worker.

JAMES R. GORMAN, M.D., *Chairman*
WILLIAM T. PUGH, M.D.
SIMON H. ROSENTHAL, M.D.

Dr. Farley

WHEREAS God in His infinite wisdom has removed Linwood Farley, M.D. from our midst on November 18, 1958, in his fifty-eighth year, we, the members of the Williamsburg-James City County Medical Society, are grieved upon the loss of our colleague and President.

Dr. Farley, a native of Amelia County, attended Randolph-Macon Academy and the University of Richmond. He was graduated a Doctor of Medicine from the Medical College of Virginia in 1928. Following internship at the Petersburg Hospital, he established his practice in Courtland in 1929. He enrolled in the Johns Hopkins School of Public Health in 1935. Later he became associated with the Virginia State Department of Health, and served in health departments in Hanover and Augusta counties.

He has been Director of Public Health for the City of Williamsburg, and the counties of Charles City, New Kent, James City and York since 1947. His accomplishments for the welfare of this community and the adjacent counties are well known. He met successfully the challenge to the health facilities of this area during the Jamestown Festival in 1957.

He served our Society as Secretary-Treasurer in 1955, Vice-President in 1956 and 1957, and President in 1958. We count it a great privilege to have known him, to have worked with him as a physician, and to have been in this Society with him.

THEREFORE, BE IT RESOLVED that we convey to his bereaved family our regard of him and our sympathy in their loss, and

BE IT RESOLVED FURTHER that this Society record in its minutes our sorrow upon his death, and that this memoriam be sent to Mrs. Farley, and also to the Virginia Medical Monthly.

HUGH G. STOKES, M.D.
CARLTON J. CASEY, M.D.

Dr. Agnew

WHEREAS Almighty God has called from our midst our fellow co-worker and friend, Lloyd C. Agnew, October 8, 1958, the Lynchburg Academy of Medicine requests the following resolution be spread upon its minutes and a copy be sent to his family and to the Virginia Medical Monthly.

BE IT THEREFORE RESOLVED that the Lynchburg Academy of Medicine, the City of Lynchburg and surrounding community, The Medical Society of Virginia, and his many friends have lost a valued member, whose ideals, devotion to duty, moral and ethical standards were of the highest caliber.

BE IT FURTHER KNOWN that during his professional career he rendered invaluable services to the physicians, patients, and hospitals of this community. In his chosen specialty of anesthesiology, he was a pioneer in this community and lived to further and see its advance, not only in this community, but in this State.

He served his country with honor during World War II, rendering his services in active combat throughout the entire Pacific Campaign.

BE IT FURTHER RESOLVED that we, the members of the Lynchburg Academy of Medicine, miss him deeply and extend to his wife and children our sincere and deepest sympathy.

ROBERT L. MORRISON, M.D., *Chairman*
WILLIAM T. PUGH, M.D.
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Kenneth D. Bailey, M.D.-------Fairmont, W. Va.
Rear Admiral Bruce E. Bradley
Washington, D.C.
F. Willson Daily, M.D.----------Roanoke, Va.
Windsor S. Davies, M.D.----------Detroit, Mich.
Jeff Davis, M.D.----------New York, N.Y.
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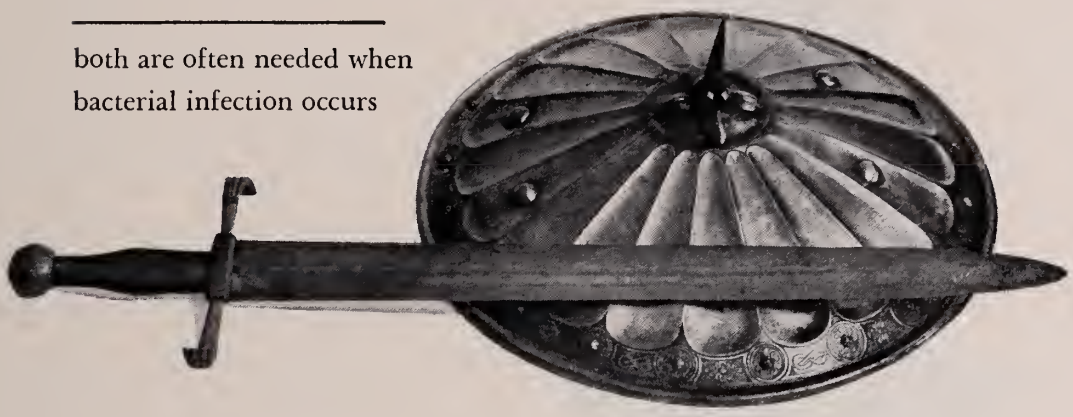
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stimulates the appetite,

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provides: supplementary amounts of vitamins, minerals and soluble proteins,

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protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

DOSAGE *is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

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Ferrous lactate (supplying 37 mg. elemental iron)	195 mg. (3 gr.)
Vitamin B_{12} crystalline with intrinsic factor concentrate	0.5 U.S.P. unit*
Thiamine hydrochloride	2.5 mg.
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Specific Antihistaminic Effect
reduces—erythema, excoriation and extent of lesions[1-4]

Recommended Oral Dosage:
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References: 1. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 2. Eisenberg, B. C., Clinical Medicine *5*:897-904 (July) 1958. 3. Robinson, H. M., et al.: J.A.M.A. *161*:604-606 (June 16) 1958. 4. Robinson, H. H., et al.: So. Med. J. *50*:1282 (Oct.) 1957.

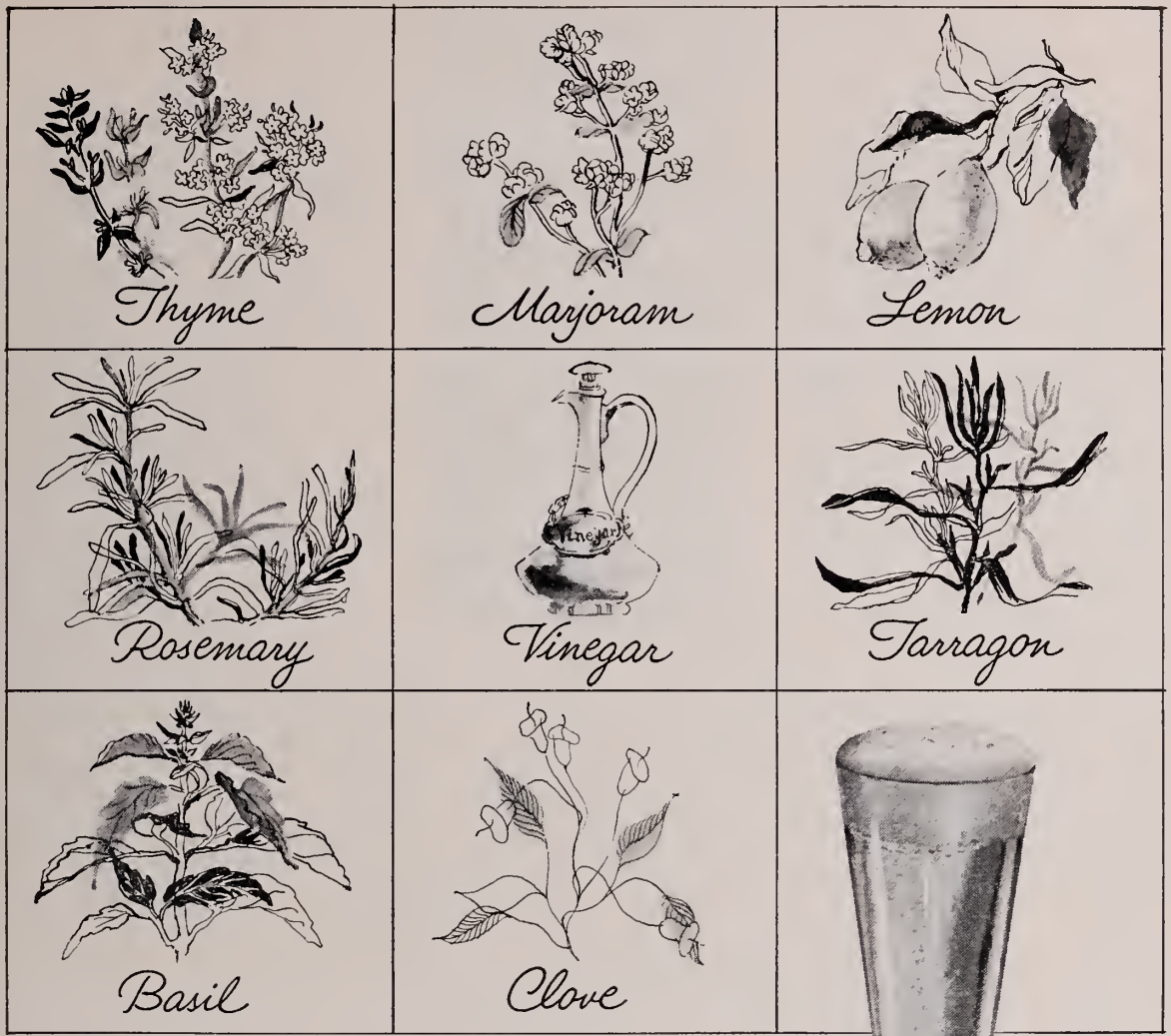
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The Low Sodium Diet

Here are some things your patient can do to season his Low Sodium Diet. Spices and herbs, lemon and lime, variously flavored vinegars and some pepper are all he needs.

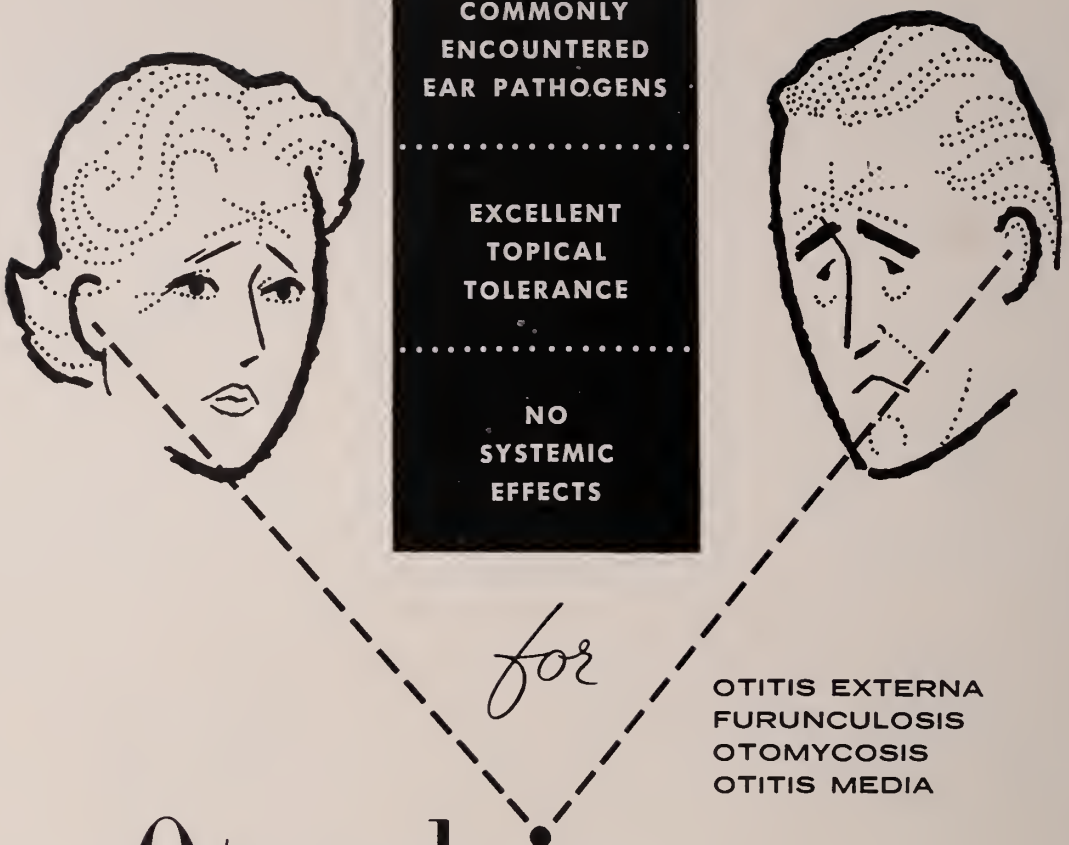
Thyme, marjoram and pepper add zest to hamburger. Chicken's delicious with lemon, rosemary and sweet butter to baste. He can try sweet butter with nutmeg on green beans, savory on limas, tarragon with carrots, basil with tomatoes. Onions boiled with whole clove and thyme delight the taste of an epicure!

With these flavor tricks to add zest to his meals—and a glass of beer* now and then, at your discretion, your patient has a diet that's both good tasting and good for him.

*Sodium: 7 mg./100 gm., 17 mg./8 oz. glass (Average of American Beers)

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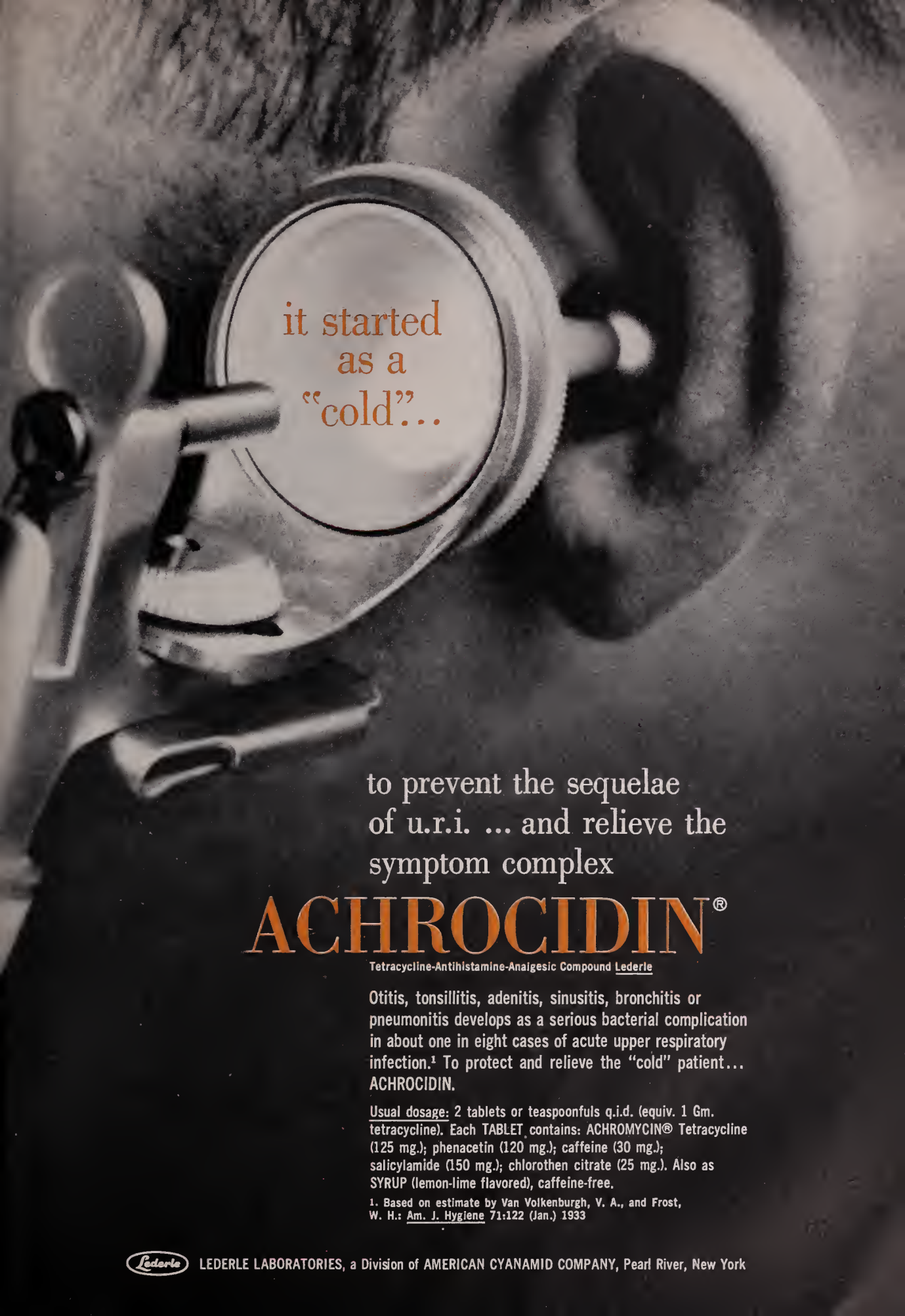
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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

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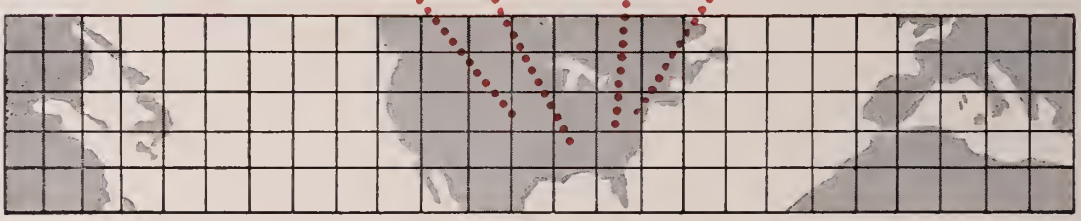
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Supplied: Tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Smigel, J. O., et al.: J. Am. Ger. Soc., in press. 2. Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958. 3. Ayd, F. J., Jr.: New York J. Med. 57:1742 (May 15) 1957. 4. Menger, H. C.: New York J. Med. 58:1684 (May 15) 1958. 5. Coirault, M., et al.: Presse méd. 64:2239 (Dec. 26) 1956. 6. Bayart, J.: Presented at the International Congress of Pediatrics, Copenhagen, Denmark, July 22-27, 1956.

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curbs secretion when excessive
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Activity appears to be restricted to the desired site of action.
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References: 1. Finkelstein, Murray: Journal of Pharmacology and Experimental Therapeutics, in press. 2. Winkelstein, Asher: Paper in preparation.

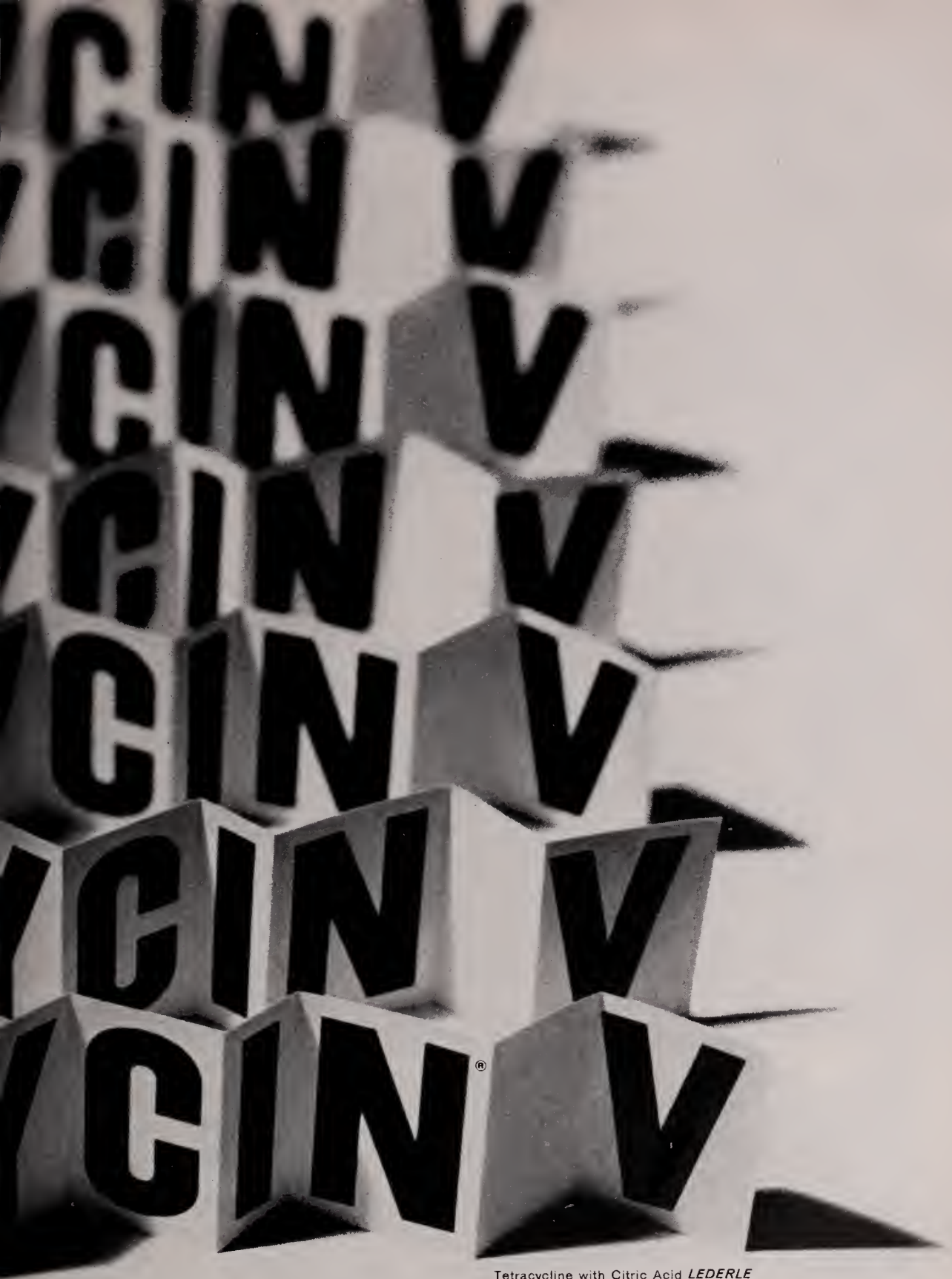
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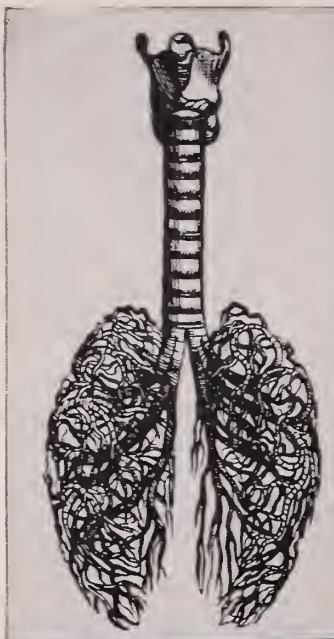



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SULTUSSIN triple sulfonamides add their antibacterial power to your choice of antibiotic to....

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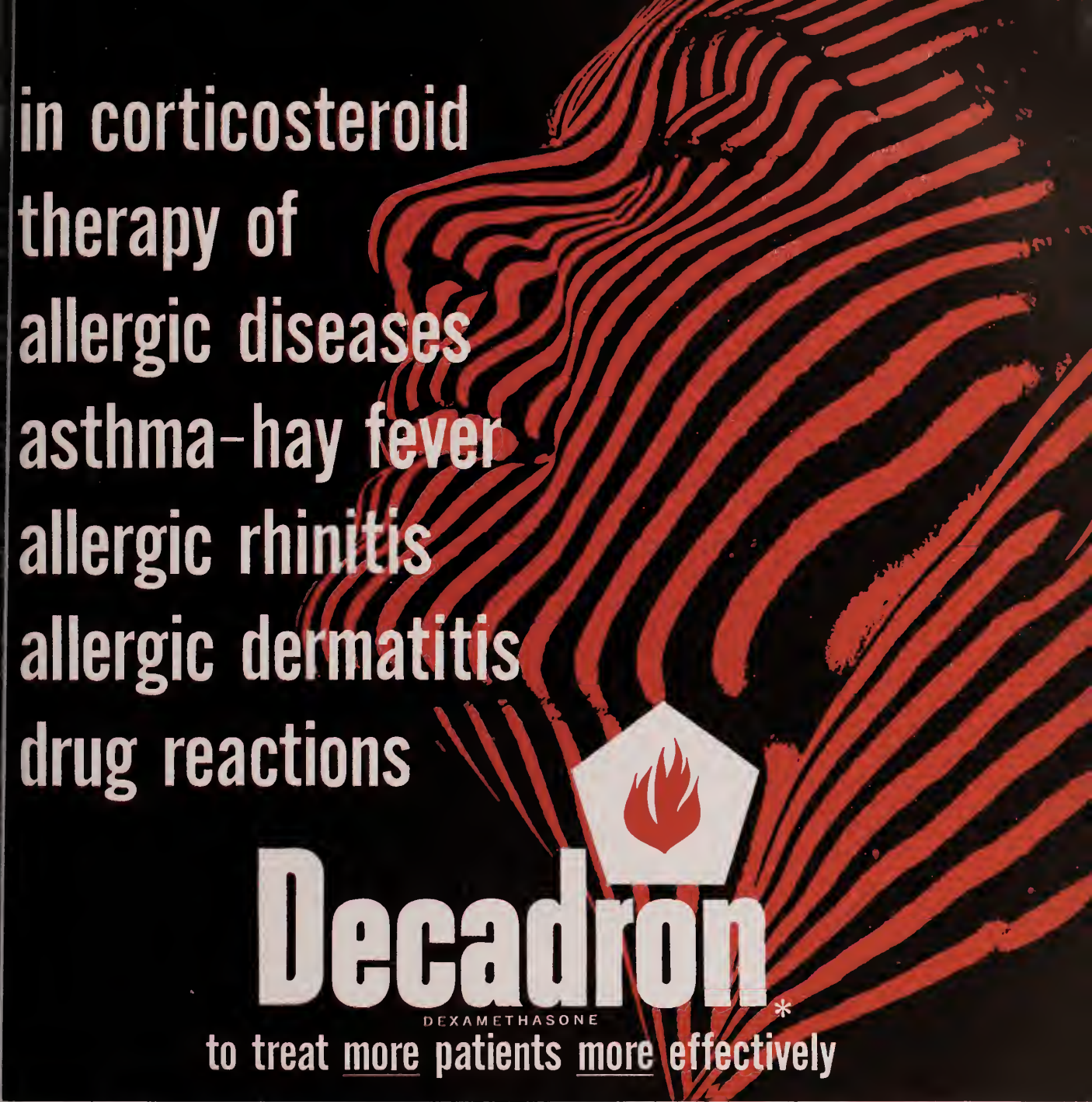
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Sulfamerazine	0.083 Gm.	0.166 Gm.
Sulfamethazine	0.083 Gm.	0.166 Gm.
Pyrilamine Maleate	3.125 mg.	6.25 mg.
Phenyltoloxamine Dihydrogen Citrate	3.125 mg.	6.25 mg.
Glyceryl Guaiacolate	25.0 mg.	50.0 mg.
Ephedrine Sulfate	2.5 mg.	5.0 mg.

Supplied:
Liquid in 4 ounce and pint bottles.
Tablets, bottles of 50 and 100.

REFER TO PDR PAGE 825

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SPONTIN IN SERIOUS

A Special Report from Abbott
to the Medical Profession
on a Year's Clinical Experience
with SPONTIN®
(Ristocetin, Abbott)

In a Spanish province, a patient lay dying of endocarditis. A short wave radio appeal for SPONTIN was intercepted by a Baltimore physician. The antibiotic was immediately flown to this faraway land, and 10 days later—the patient had recovered.

In Chicago, a moribund patient had been administered 18 combinations of 10 different antibiotics without success. Involved was a hospital-acquired staphylococcal pneumonia—plus complications. SPONTIN was substituted and the patient lived.

A five-week-old infant was critically ill with staphylococcal enteritis. Treatment failures included erythromycin and chloramphenicol. Three days of SPONTIN saved this life. The list is long and impressive and it grows daily.

Recently, a study[1] was made of serious and resistant staphylococcal infections reported to Abbott Laboratories. Many of these cases had serious complicating diseases—many were moribund, or almost so, at the time SPONTIN was started. Yet, out of the 160 staphylococcal cases studied, 93 were reported cured and 38 improved after the administration of SPONTIN.

Out of the total of 251 patients with severe infections caused by gram-positive or mixed organisms, 149 were reported cured and 53 others improved. And the record for pediatric practice was every bit as good.

Additionally, SPONTIN continues to exhibit exceptional bactericidal activity against coccal infections[2]. And, according to another study, SPONTIN provides successful short-term therapy in endocarditis[3].

Only last October, at the Antibiotics Symposium in Washington, D. C., a panel of six leading antibiotic experts placed SPONTIN at the top of all other commercially-available antibiotics for treating serious staphylococcal infections. Also, six papers—all dealing with the effectiveness of ristocetin (SPONTIN®) in treating staphylococcal infections—were presented at the Symposium.

One of the most encouraging aspects of the year's literature on SPONTIN is the increasing testimony to its safety. As the months have passed and cases have accumulated by the hundreds, it has become apparent that careful attention to dosage recommendations has practically eliminated toxicity and side effects as serious obstacles to therapy. Also, recent improvements have been made in the manufacture of SPONTIN; the drug is now made from pure crystals.

A recent report[4] in the Journal of the American Medical Association concluded, "It is our opinion that, if proper precautions are observed, ristocetin is a [well tolerated] and potent agent to employ in the treatment of staphylococcal infections." And in another study, after successfully treating 28 patients with a variety of staphylococcal infections, the authors reported[5], "No serious complications were noted."

Few more dramatic records have been written in such a short space of time. SPONTIN has proved itself to be a good answer, perhaps the best answer at present, to the resistant staphylococcal problem—and of real value in other serious coccal infections. It may well be your answer when you're confronted with a serious infection.

Abbott

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STAPHYLOCOCCAL INFECTIONS

Excerpts from Reports Read at the Antibiotics Symposium

Spontin In Treating Severe Respiratory Infections —"In 13 of 20 patients the results were excellent, with clinical response being evident within one to four days after institution of therapy. In three additional patients, there was some degree of improvement in pneumonic processes superimposed on tuberculosis in two cases and on pulmonary neoplasm in one. In all other cases, serious antecedent pathology undoubtedly influenced the negative or equivocal response to ristocetin therapy.[6]"

Spontin In Treating Staphylococcal Infections—After successfully treating 28 patients, the authors wrote, "Ristocetin or Spontin has proved to be bactericidal and bacteriostatic, particularly for the *Staphylococcus aureus,* which is often resistant to many other antibiotics.[5]"

Spontin In Treating Seven Difficult Cases – "Ristocetin has produced excellent results in eradicating, mitigating or preventing infection in seven selected difficult cases. Six of the seven cases involved *Staphylococcus aureus* which did not respond to chemotherapy with other antibiotics.[7]"

Spontin Blood Levels In Children – "Ristocetin was administered as a single intravenous injection of 12.5 milligrams per kilogram. This resulted in serum levels ranging from 1.3 to 10.6 mcg. after two hours with a gradual fall to a level of 0.7 mcg. per cubic centimeter or less after 12 hours.[8]"

Spontin In Treating Staphylococcal Pneumonia —"Ristocetin was used in the treatment of 24 patients with staphylococcal pneumonia, 17 of whom had failed to respond to previously administered antibiotics. Complete clearing of pneumonitis was obtained in 16 patients and significant improvement occurred in two others. Two patients died of pneumonia; four others succumbed to other lethal diseases.[9]"

Spontin In Treating Children and Adults – "Ristocetin completely controlled severe staphylococcal infections in 11 adults and six children who received adequate therapy.[10]"

1. Totals represent published reports and personal communications to Abbott Laboratories.
2. Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 15, 16, 17, 1958.
3. Romansky, M. J., and Holmes, R., Successful Short-Term Therapy of Enterococcal and Staphylococcal Endocarditis with Ristocetin–Seven Patients. Preliminary Report, Antibiotics Annual, 1957-58, p. 187.
4. J. A. M. A., 167:1584, July 26, 1958.
5. Bush, L. F., et al., The Use of Ristocetin (Spontin) in Staphylococcal Infections, In Press, Antibiotics Annual, 1958-59.
6. Billow, F. J., et al., Clinical Observations on Ristocetin–A Preliminary Report on its Efficacy and Toxicity in 20 Unselected Severe Respiratory Infections, In Press, Antibiotics Annual, 1958-59.
7. Miller, J. M., et al., Ristocetin in the Treatment of Seven Selected Difficult Cases, In Press, Antibiotics Annual, 1958-59.
8. Asay, L. D., et al., Ristocetin Serum Levels in Children, In Press, Antibiotics Annual, 1958-59.
9. Schumacher, L. R., et al., Experiences with Ristocetin in Staphylococcal Pneumonia: Observations in 23 Cases, In Press, Antibiotics Annual, 1958-59.
10. Terry, R. B., Ristocetin in Children and Adults, In Press, Antibiotics Annual, 1958-59.



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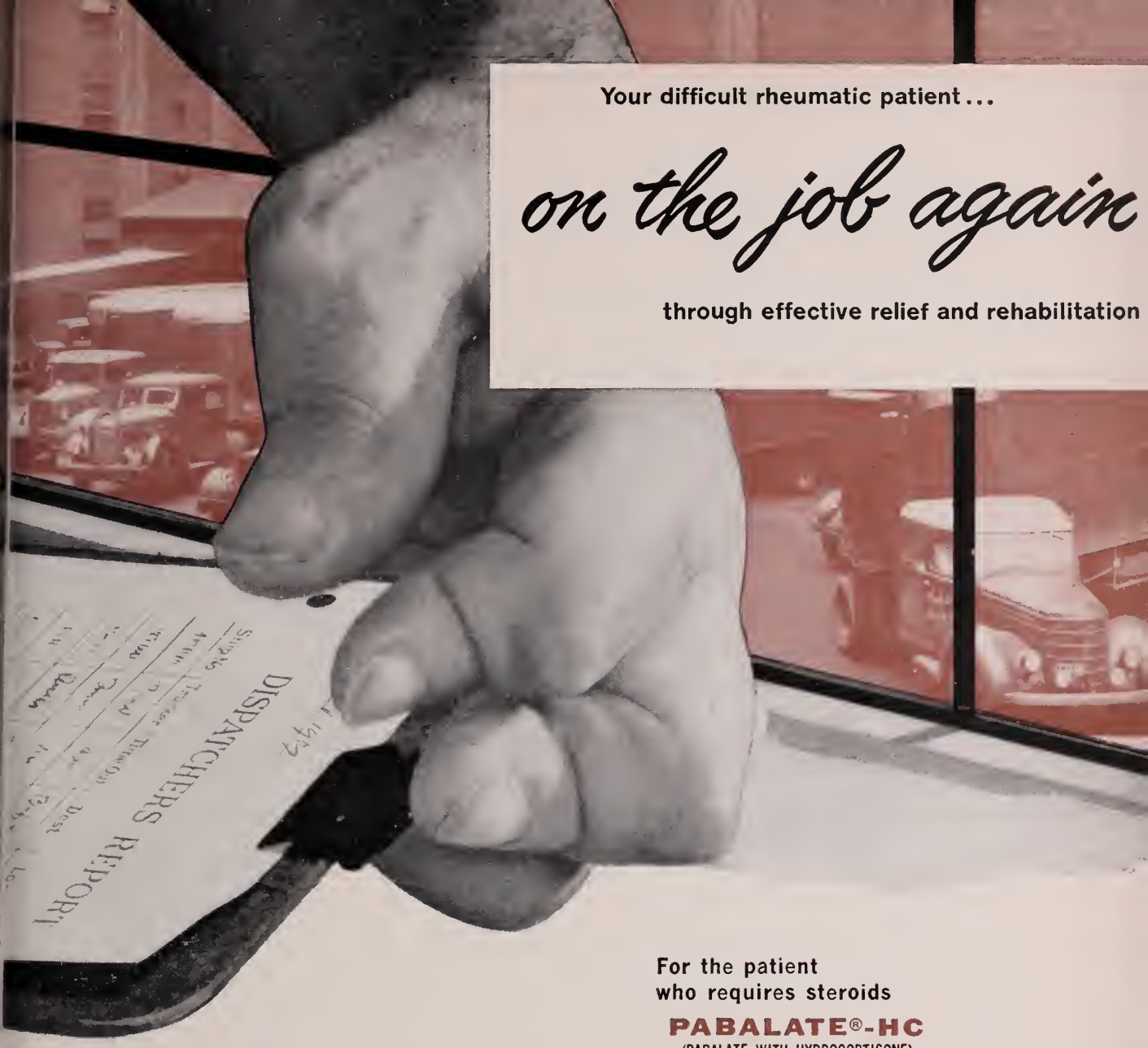
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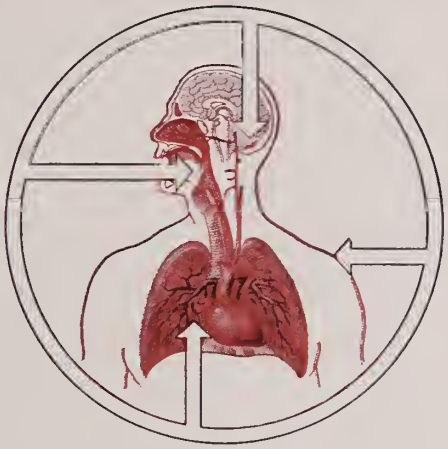
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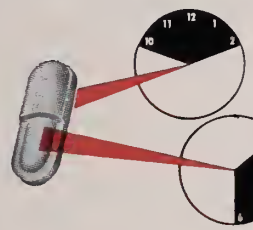
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†Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. Fabricant, N. D.: E. E. N. T. Monthly 37:460 (July) 1958. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

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SYRUP OF CHLORAL HYDRATE

NEW RALDRATE NOW SOLVES THE PROBLEM OF TASTE RESISTANCE TO CHLORAL-HYDRATE

10 Grains (U.S.P. Dose) of palatable lime flavored chloral-hydrate syrup in each teaspoonful

RAPID SEDATION WITHOUT HANGOVER

JONES and VAUGHAN, Inc. RICHMOND 26, VA.

J. and V.

The Story of Kent

How Lorillard research produced a cigarette with less tars and nicotine than any other leading filter brand



A major research foundation, under Lorillard sponsorship, determined that the average puff of cigarette smoke contained over 12 billion semi-solid particles. Further research revealed that inhaled smoke from ordinary cigarettes has a predominant proportion of particles, from 0.1 to 1 micron in diameter, average 0.6 micron.

Ordinary filter fibers are so large that they create spaces through which the small semi-solid smoke particle can easily pass. However, in the superior Kent filter, the fibers are mechanically manipulated in such a manner as to create extremely tortuous passageways for the smoke. This is the "MICRONITE" Filter.

The Kent filter is composed of pure cellulose acetate, which is common to the filters used in all leading brands. However, the physical construction of the Kent filter is the exclusive development of Lorillard research, and is different from and superior to all the rest.

Thus, Lorillard research created a filter of ideal purity, with extraordinary ability to eliminate smoke particles...and at the same time, a cigarette of such fine taste that during the past twelve months more smokers changed to Kent than to any other cigarette in America.

Of all leading filter cigarettes

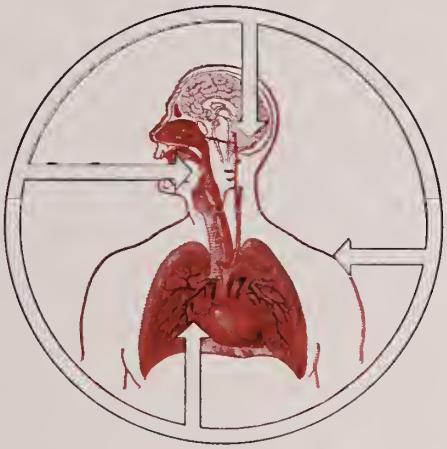
KENT FILTERS BEST

You get less tars and nicotine in the smoke of Kent than in any other leading filter cigarette in America

If you would like for your own use the booklet, "The Story of Kent," write to:

P. Lorillard Company, Research Department
200 East 42nd St., N.Y. 17, N.Y.

Now—All cold symptoms can be controlled



Provides Triaminic for more complete and more effective relief from nasal and paranasal congestion because of systemic transport to *all* respiratory membranes—without drawbacks of topical therapy.†

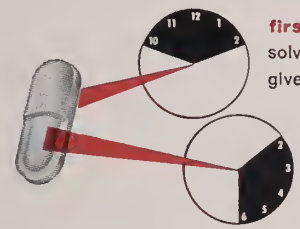
Provides well-tolerated APAP (N-acetyl-p-aminophenol) for prompt and effective analgesic and antipyretic action to make the patient more comfortable.

Provides Dormethan (brand of dextromethorphan HBr) for non-narcotic antitussive action on the cough reflex center in the medulla—as effective as codeine but without codeine's drawbacks.

Provides terpin hydrate, classic expectorant to thin inspissated mucus and help the patient clear the respiratory passages.

†Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. Fabricant, N. D.: E. E. N. T. Monthly 37:460 (July) 1958. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

Special "timed release" design



first—the outer layer dissolves within minutes to give 3 to 4 hours of relief

then—the inner core releases its ingredients to sustain relief for 3 to 4 more hours

also available for those patients who prefer liquid medication: **Tussagesic suspension**

Each TUSSAGESIC tablet provides:

TRIAMINIC®	50 mg.
(phenylpropanolamine HCl	25 mg.
pheniramine maleate	12.5 mg.
pyrilamine maleate	12.5 mg.)
Dormethan (brand of dextromethorphan HBr)	30 mg.
Terpin hydrate	180 mg.
APAP (N-acetyl-p-aminophenol)	325 mg.

Dosage: One tablet in the morning, midafternoon and in the evening, if needed.

Tussagesic* *timed-release tablets*

Contains* **TRIAMINIC *to* STOP *running noses* *and open stuffed noses orally*

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska • Peterborough, Canada

BONADOXIN®

(tablets and drops)

STOPS STOPS STOPS MORNING SICKNESS



BONADOXIN Tablets relieve nausea and vomiting of pregnancy in 9 out of 10,[1-7] often within a few hours.

Moreover, a controlled study of 620 cases reported that with BONADOXIN "toxicity and intolerance [are] zero."[1] BONADOXIN is rarely soporific. It is free from the risks associated with overpotent tranquilizer-antinauseants.

NOTE: BONADOXIN has also been shown highly effective in relieving nausea and vomiting associated with: anesthesia, radiation sickness, Meniere's syndrome, labyrinthitis, cerebral arteriosclerosis, and motion sickness.

Each tiny pink-and-blue BONADOXIN tablet contains:

Meclizine HCl (25 mg.) . . . for antivertiginous, antinauseant effects.

Pyridoxine HCl (50 mg.) . . . for specific metabolic replacement.

DOSAGE: usually one tablet at bedtime. Severe cases may require another dose on arising.

SUPPLIED: tiny pink-and-blue tablets, bottles of 25 and 100. Fruit-flavored, clear green syrup in 30 cc. dropper bottles.

Infant colic? BONADOXIN DROPS are antispasmodic . . . stop colic in 84%,[8-10] without the risk of belladonna and barbiturates.

Each cc. contains:
Meclizine dihydrochloride . . 8.33 mg.
Pyridoxine hydrochloride . . . 16.67 mg.

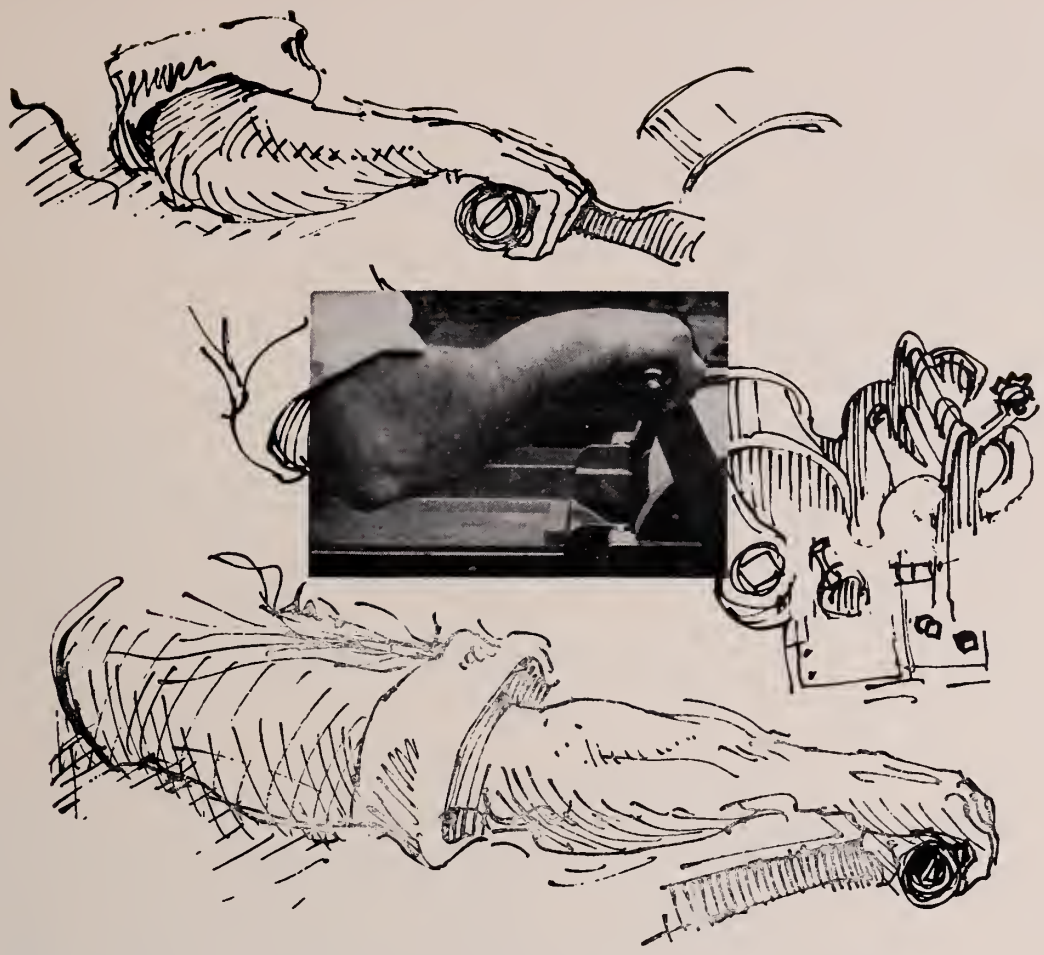
Dosage:

under 6 months . . . . 0.5 cc.	2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years . . . . 1.5 to 2 cc.	
2 to 6 years . . 3 cc.	
adults and children over 6 . . . . . 1 tsp. (5 cc.)	

References: 1. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957. 2. Groskloss, H. H., et al.: Clin. Med. 2:885 (Sept.) 1955. 3. Weinberg, A., and Werner, W. E. F.: Am. Pract. & Digest Treat. 6:580 (April) 1955. 4. Crawley, C. R.: West. J. Surg. 8:463 (Aug.) 1956. 5. Tartikoff, G.: Clin. Med. 3:223 (March) 1955. 6. Dunn, R. D., and Fox, L. P.: Clinical exhibit. 7. Codling, J. W., and Lowden, R. J.: Northwest Med. 57:331 (March) 1958. 8. Dougan, H. T.: Personal communication. 9. Leonard, C. L.: Personal communication. 10. Steinberg, C. L.: Personal communication.

Rx only

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being



To the relief of musculoskeletal pain, new MEDAPRIN* adds restoration of function

Analgesics offer temporary relief of musculoskeletal pain, but they merely *mask* pain rather than getting at its *cause*. New Medaprin, in addition to bringing about prompt subjective improvement, promotes the *restoration of normal function* by suppressing the inflammation that *causes* the pain.

Medaprin, Upjohn's new analgesic-steroid combination, contains aspirin plus Medrol,** the corticosteroid with *the best therapeutic ratio in the steroid field.*† Instead of suffering recurrent discomfort because of the "wearing off" of analgesics, the patient on Medaprin experiences a smooth, *extended* relief and more normal mobility.

Indications: Medaprin is indicated in mild-to-moderate rheumatic and musculoskeletal conditions, including rheumatoid arthritis, deltoid bursitis, low back pain, neuralgia, synovitis, fibromyositis, osteoarthritis, low back sprain, traumatic wrist, sciatica, and "tennis elbow."

Dosage: The recommended dosage is 1 tablet q.i.d. The usual cautions and contraindications of corticotherapy should be observed.

Supplied: In bottles of 100 and 500.

Formula: Each Medaprin tablet contains

- 300 mg. acetylsalicylic acid, for prompt relief of pain
- 1 mg. Medrol, to suppress the causative inflammation
- 200 mg. calcium carbonate, as buffer

*TRADEMARK **TRADEMARK, REG. U. S. PAT. OFF.—METHYLPREDNISOLONE, UPJOHN
†RATIO OF DESIRED EFFECTS TO UNDESIRED EFFECTS

The Upjohn Company, Kalamazoo, Michigan

Upjohn

NOW—YOU CAN GET THE
UNSURPASSED ADVANTAGES
OF ARISTOCORT
IN SALICYLATE
COMBINATION

Arist

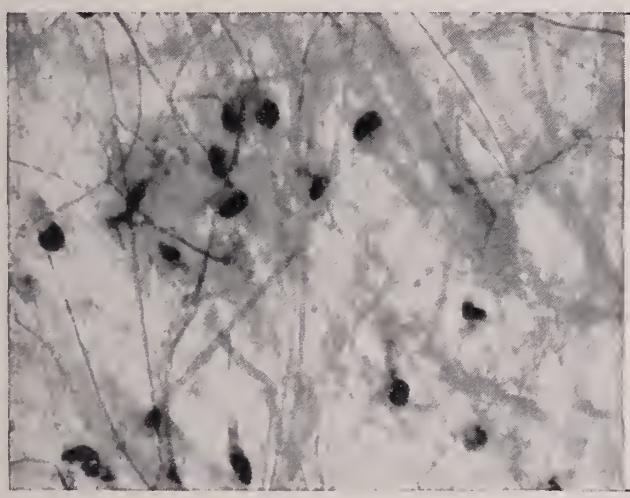
Aristogesic combines the *anti-inflammatory* effects of Aristocort® Triamcinolone with the *analgesic* action of a most potent salicylate. This means that the dosage of each is *substantially lower* than that ordinarily required for each agent alone. With Aristogesic the physician has exceptionally wide latitude in adjusting the dosage to the lowest effective level.

The possibility of gastric distress from either salicylamide or corticosteroid is minimized because of lower dosage required. This is further reduced by the buffer action of aluminum hydroxide. And the ascorbic acid helps meet the increased need for this vitamin in stress conditions. Because of the low dosage, side effects with Aristogesic have been relatively infrequent and minor in nature. However, more serious side effects have traditionally been observed on all corticosteroid therapy. Patients on long-term Aristogesic therapy should, therefore, be observed carefully.

ogesic*

Steroid—Analgesic Compound LEDERLE

for relief of *chronic*—but *less severe* pain of rheumatic origin



Indications: Mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, mild spondylitis, myositis, fibrositis, neuritis and certain muscular strains.

Dosage: Average initial dosage: 2 capsules 3 or 4 times daily. Maintenance dosage to be adjusted according to response.

Each Aristogesic Capsule contains:

ARISTOCORT® Triamcinolone . . . . . 0.5 mg.
Salicylamide . . . . . 325 mg.
Aluminum Hydroxide . . 75 mg.
Ascorbic Acid . . . . . 20 mg.

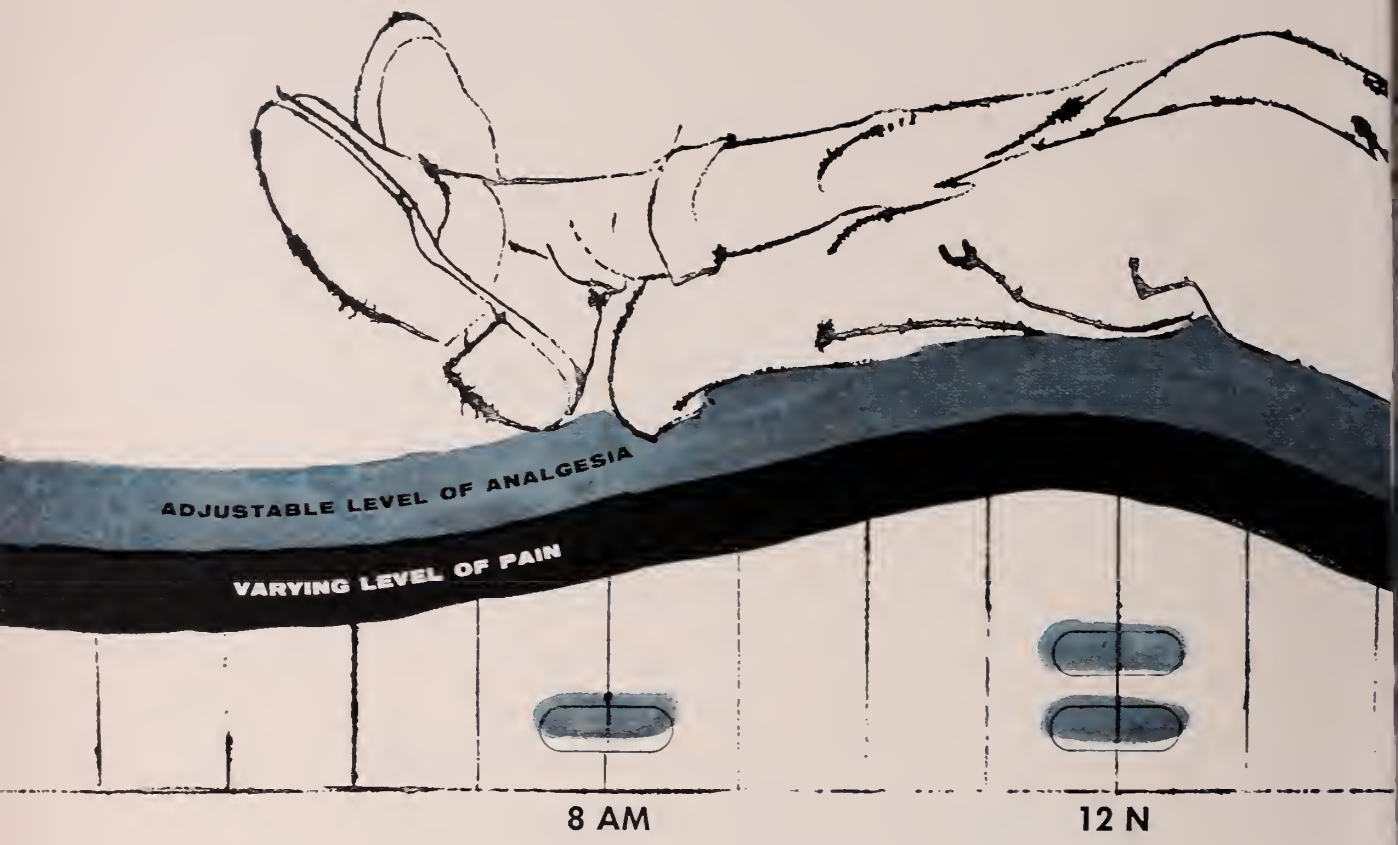
Supply: Bottles of 100.

Collagen tissue (×250)

*TRADEMARK

Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



keep all patients* pain-free at all times

- with the proper potency to match pain intensity
- with dosage flexibility to match pain variations

Phenaphen®

or

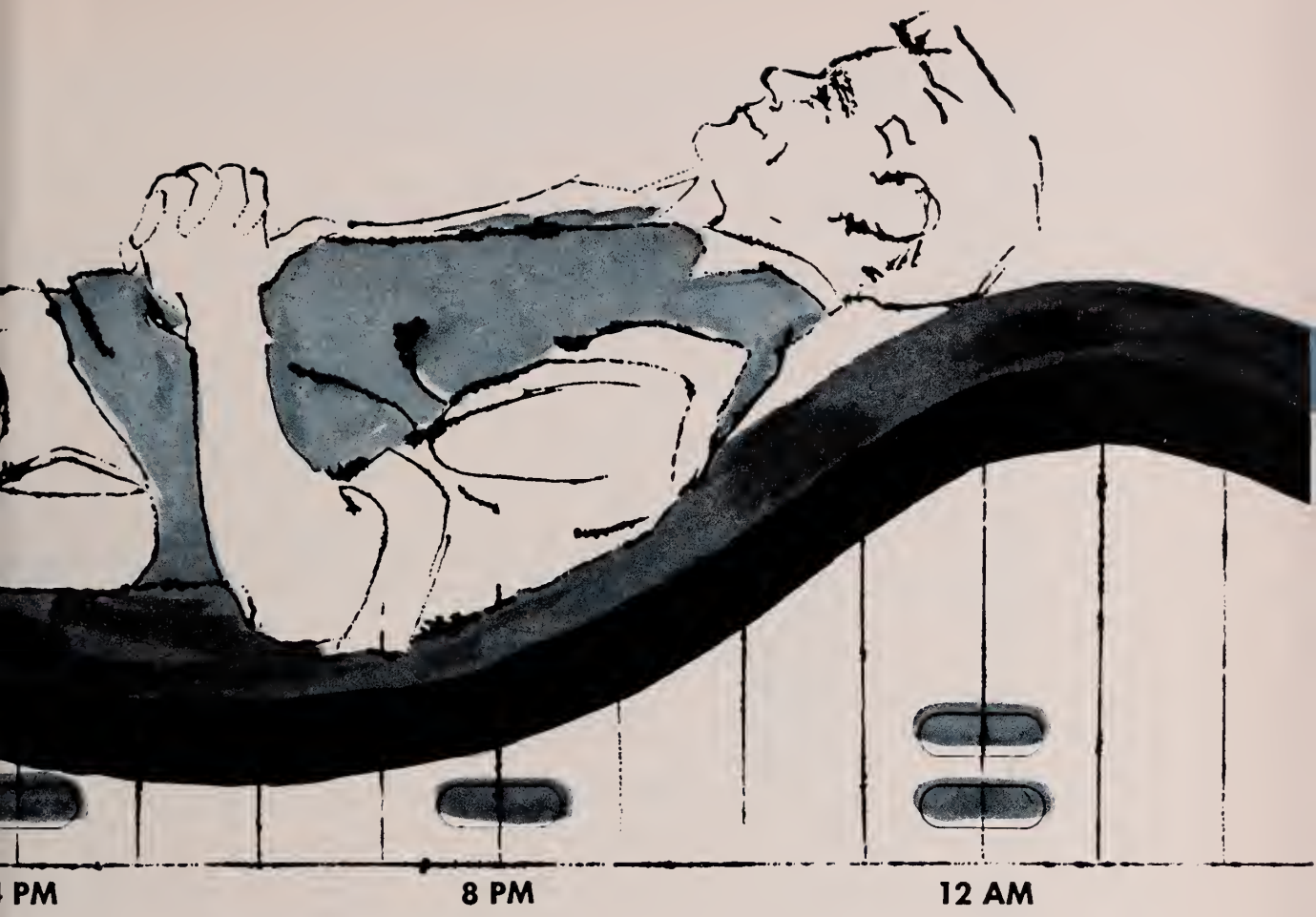
Phenaphen®-with Codeine

*except those for whom recourse to morphine is inescapable.

Robins

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

Ethical Pharmaceuticals of Merit since 1878



Phenaphen and Phenaphen with Codeine provide
a wide range of analgesia, plus complete dosage flexibility,
to match varying pain requirements.

Yours to prescribe:

The **right** dose of the **right** potency at the **right** time.

Phenaphen

Basic non-narcotic formula

For mild to moderate pain

Each capsule contains:

Phenacetin (3 gr.) ..... 194.0 mg.
Acetylsalicylic acid (2½ gr.) ..... 162.0 mg.
Phenobarbital (¼ gr.) ..... 16.2 mg.
Hyoscyamine sulfate ..... 0.031 mg.

Phenaphen No. 2

Phenaphen with Codeine Phosphate ¼ gr. (16.2 mg.)

For moderate to severe pain

Phenaphen No. 3

Phenaphen with Codeine Phosphate ½ gr. (32.4 mg.)

For severe or stubborn pain

Phenaphen No. 4

Phenaphen with Codeine Phosphate 1 gr. (64.8 mg.)

For stubborn or intense pain—to obviate or postpone use of morphine or addicting synthetic narcotics

DOSAGE: One or two capsules as required.

℞

PRONOUNCED TAY-O

Tao*

(triacetyloleandomycin)

Capsules / Oral Suspension

** designed for superior control of common Gram-positive infections*

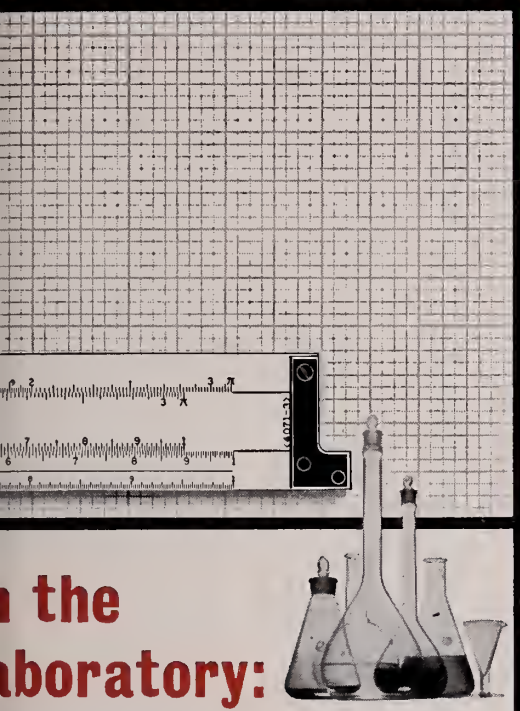




in the patient:

95% effective in published cases[1-8]

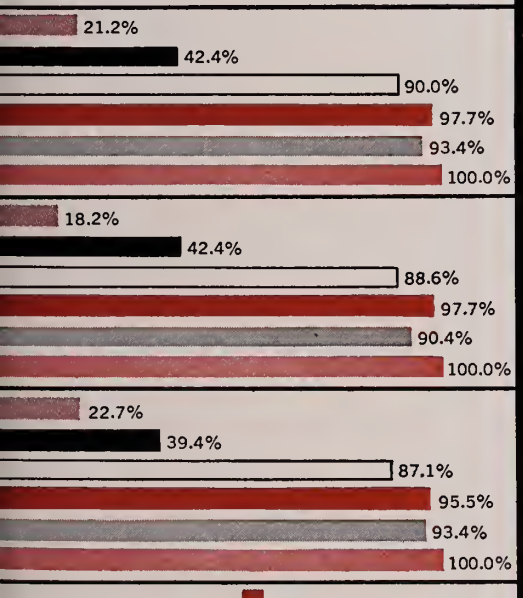
Conditions treated	No. of Patients	Cured	Improved	Failure
ALL INFECTIONS	**558**	**448**	**80**	**30**
Respiratory infections	**258**	**208**	**31**	**19**
Pharyngitis and/or tonsillitis	65	58	5	2
Pneumonia	90	66	17	7
Infectious asthma	44	38	–	6
Otitis media	31	29	2	–
Other respiratory (bronchitis, bronchiolitis, bronchiectasis, pneumonitis, laryngotracheitis, strep throat)	28	17	7	4
Skin and soft tissue infections	**230**	**191**	**38**	**1**
Infected wounds, incisions and lacerations	41	33	8	–
Abscesses	51	43	8	–
Furunculosis	58	51	6	1
Acne, pustular	43	28	15	–
Pyoderma	19	19	–	–
Other skin and soft tissue (infected burns, cellulitis, impetigo, ulcers, others)	18	17	1	–
Genitourinary infections	**28**	**19**	**3**	**6**
Acute pyelitis and cystitis	10	8	2	–
Urethritis with gonorrhea or cystitis	8	8	–	–
Pyelonephritis	4	1	–	3
Salpingitis	5	1	1	3
Pelvic inflammation with endometriosis	1	1	–	–
Miscellaneous (adenitis, enteritis, enterocolitis, subacute bacterial endocarditis, fever, hematoma, staphylococcus carriers, osteomyelitis, tenosynovitis, septic arthritis, acute bursitis, periarthritis)	42	30	8	4



n the
aboratory:

er 90% effective
ainst resistant staph

MPARATIVE TESTS BY THREE METHODS
SC, TUBE DILUTION, CYLINDER PLATE)
130 STAPHYLOCOCCI[9]



rcentage of organisms inhibited by the range of
ncentrations listed for each antibiotic.

Other Tao advantages:

Rapidly absorbed—stable in gastric acid,[7] TAO needs no retarding protective coating

Low in toxicity—freedom from side effects in 96% of patients treated; cessation of therapy is rarely required

Highly palatable—"practically tasteless"[7] active ingredient in a pleasant cherry-flavored medium.

Dosage and Administration: Dosage varies according to the severity of the infection. **For adults,** the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. **For children** 8 months to 8 years, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since TAO is therapeutically stable in gastric acid, it may be administered without regard to meals.

Supplied: TAO Capsules—250 mg. and 125 mg., bottles of 60. TAO for Oral Suspension—1.5 Gm., 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. Koch, R., and Asay, L. D.: J. Pediat., in press. 2. Leming, B. H., Jr., et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 3. Meliman, et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 4. Olansky, S., and McCormick, G. E., Jr.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 5. Shubin, H., et al.: Antibiotics Annual 1957-1958, New York, N. Y., Medical Encyclopedia, Inc., 1958, p. 679. 6. Isenberg, H., and Karelitz, S.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 7. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy 5:527 (Aug.) 1958. 8. Kaplan, M. A., and Goldin, M.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 9. Truant, J. P.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958.

TAO dosage forms—
for specific clinical situations

TAO Pediatric Drops

For children—flavorful, easy to administer.

Supplied: When reconstituted, 100 mg. per cc. Special calibrated droppers—5 drops (approx. 25 mg.) and 10 drops (approx. 50 mg.). 10 cc. bottle.

TAO-AC (TAO analgesic, antihistaminic compound)

To eradicate pain and physical discomfort in respiratory disorders.

Supplied: In bottles of 36 capsules.

TAOMID* (TAO with triple sulfas)

For dual control of Gram-positive and Gram-negative infections.

Supplied: Tablets, bottles of 60. Oral Suspension, bottles of 60 cc.

Intramuscular or Intravenous

For direct action—in clinical emergencies.

Supplied: In 10 cc. vials.

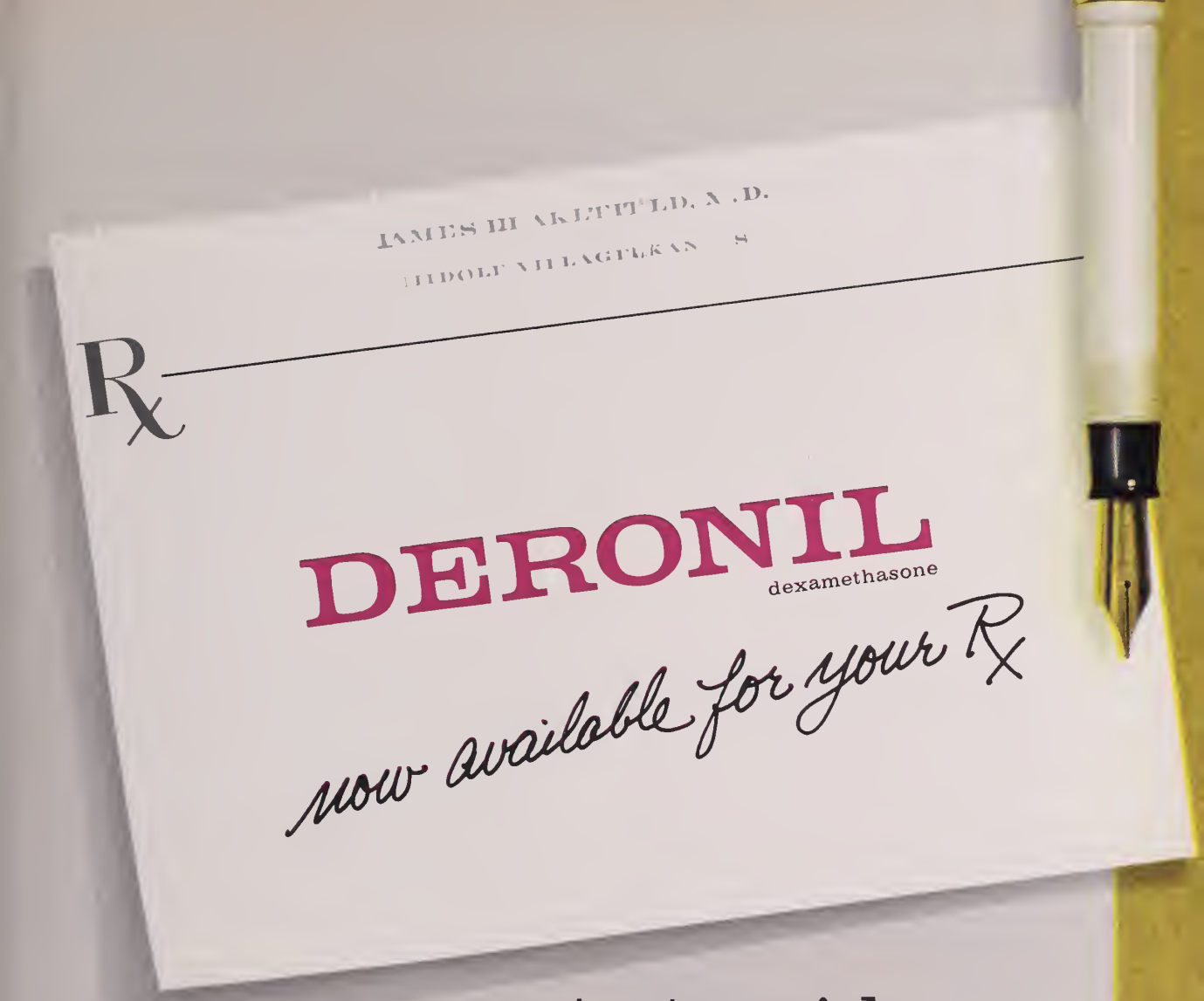
*TRADEMARK

New York 17, N.Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being

"It is concluded that the addition of buffering agents to acetylsalicylic acid in the concentrations used serves no clinically detectable useful purpose."[1]

[1]Sadove, Max S. and Schwartz, Lester: An Evaluation of Buffered Versus Nonbuffered Acetylsalicylic Acid, Postgraduate Medicine; 24:183, August, 1958.

Nonbuffered Material Used—Bayer® Aspirin.



newest steroid

CLINICALLY PREPROVED

maximum
steroid effectiveness in more patients

highest
anti-inflammatory activity per milligram

lowest
dosage of currently used steroids

unexcelled
freedom from significant diabetogenic effects

widest
range of steroid usefulness

Schering

today's steroid...DERONIL
dexamethasone

in rheumatoid arthritis—"highly effective...in remarkably small daily milligram doses."[1]

The initial anti-inflammatory effect of DERONIL, the most active anti-rheumatic steroid on a weight basis synthesized to date,[1-4] is observed in most patients within 24 to 48 hours. Joint pain is relieved, swelling and stiffness diminish, and range of motion increases. The patient usually feels a sense of well-being and the appetite improves. The intensified anti-inflammatory activity helps assure successful initial therapy in rheumatoid arthritic cases and frequently restores relief to patients who have shown a diminution in response to previous steroids.

TYPICAL RESULTS WITH DEXAMETHASONE THERAPY IN ARTHRITIS

Investigator or Study	No. of patients	Improvement		
		Very marked or marked	Moderate	Slight or inadequate
Boland, E. W., and Headley, N. E.[1]	11	4	5	2
Bunim, J. J., and others[3]	18	5	7	6
Series A[5]	15	4	9	2
Series B[5]	6	6	—	—
Series C[5]	3	3	—	—

DERONIL IN BRONCHIAL ASTHMA AND SEVERE RESPIRATORY ALLERGIES

Investigator or Study	No. of patients	Results		
		Excellent	Fair to good	Poor
Series D[5]	24	10	9	5
Series E[5]	12	8	3	1
Series F[5]	20	13	4	3

clinically preproved in steroid-responsive diseases

IMPROVEMENT WITH DERONIL IN A WIDE VARIETY OF ALLERGIC AND INFLAMMATORY SKIN DISEASES[5]

Disease	No. of patients	Improved	Same	Worse
Seborrheic psoriasis	1	1		
Neurodermatitis	5	5		
Allergic dermatitis	5	5		
Psoriasis	5	2	1	2
Lupus erythematosus, chronic discoid	1		1	
Atopic dermatitis	3	3		
Acne rosacea	1		1	
Nummular eczema	2	2		
"id" reactions	2	2		
Contact dermatitis	2	2		
Pityriasis rosea, severe	1	1		
Urticaria, chronic	1	1		
Totals	29	24	3	2

THERAPY WITH DERONIL IN A VARIETY OF INFLAMMATORY EYE DISEASES[5]

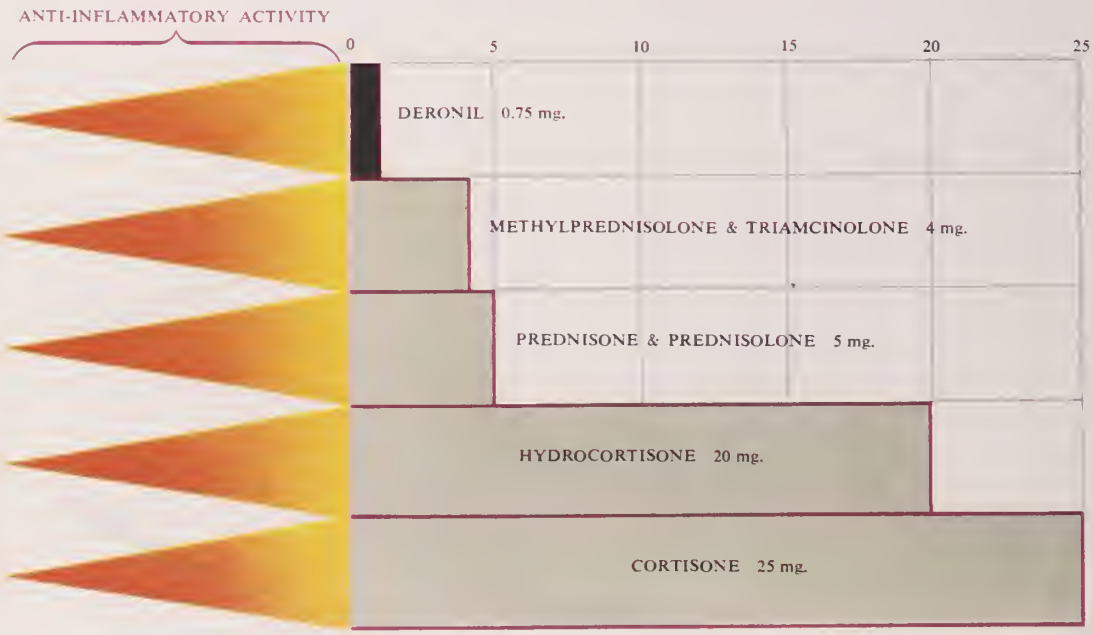
Patient, age and sex	Diagnosis	Symptoms	Results with DERONIL	Side effects
A.B., 46, M.	Postoperative uveitis		Improved; treatment being continued	None reported*
A.E., 53, M.	Choroiditis	Severe choroidal involvement	Excellent; marked improvement	None*
B.F., 60, F.	Acute choroiditis	Marked visual loss and choroidal effect	Marked improvement; therapy being continued	None*
B.K., 29, F.	Chronic uveitis	Generalized involvement	No change despite dosage increase	None*
H.K., 28, M.	Acute iritis	Blurred vision	Excellent; recovered	None*
A.P., 52, M.	Uveitis and perivasculitis	Vision loss to 20/80	Marked improvement; vision 20/30; treatment continued	None*
A.S., 34, M.	Uveitis		Excellent; patient recovered	None*

*Short-term therapy

guide to the clinical use of new DERONIL
dexamethasone

DERONIL, new 9-alpha-fluoro-16-alpha-methyl derivative of prednisolone, has at least six times the anti-inflammatory activity, milligram for milligram, of other steroids in current use. Effective dosages are the lowest in steroid therapy. And the price of DERONIL to the patient is no higher than those prevailing for other steroids.

STEROID DOSAGE EQUIVALENTS OF DERONIL



Comparative dosages of corticosteroids for equivalent anti-inflammatory activity

Dosages pre-established in the vast majority of steroid-responsive diseases

The comprehensive clinical studies conducted with DERONIL before introduction mean that initial and maintenance dosages are already established for the physician in practically all steroid-responsive diseases including rheumatoid arthritis, acute rheumatic fever, bursitis, bronchial asthma, pulmonary emphysema and fibrosis, intractable hay fever (pollenosis), disseminated lupus erythematosus, allergic and inflammatory dermatoses and eye diseases and the adrenogenital syndrome. For complete information on dosage, precautions and contraindications, consult Schering literature.

Packaging

DERONIL Tablets, 0.75 mg., scored, bottles of 50 and 500.

Bibliography

(1) Boland, E. W., and Headley, N. E.: Preliminary clinical observations with a new series of synthetic corticosteroid compounds in patients with rheumatoid arthritis, Paper presented at Annual Meet., Am. Rheumat. Assn., San Francisco, June 21, 1958. (2) Boland, E. W.: California Med. *88*:417, 1958. (3) Bunim, J. J., and others: Arthritis and Rheumatism *1*:313, 1958. (4) Spies, T. D.; Stone, R. E., and Niedermeier, W.: South. M. J. *51*:1066, 1958. (5) Reports to Clinical Research Division, Schering Corporation.

DERONIL—T.M.—brand of dexamethasone.

SCHERING CORPORATION · BLOOMFIELD, NEW JERSEY Schering

DR-J-1029

Proven

in over three years of clinical use
in over 600 clinical studies

Specific

FOR RELIEF OF ANXIETY
AND MUSCLE TENSION

Selective

Does not interfere with autonomic function
Does not impair mental efficiency,
motor control, or normal behavior
Has not produced hypotension,
agranulocytosis or jaundice

MEPROBAMATE (WALLACE)

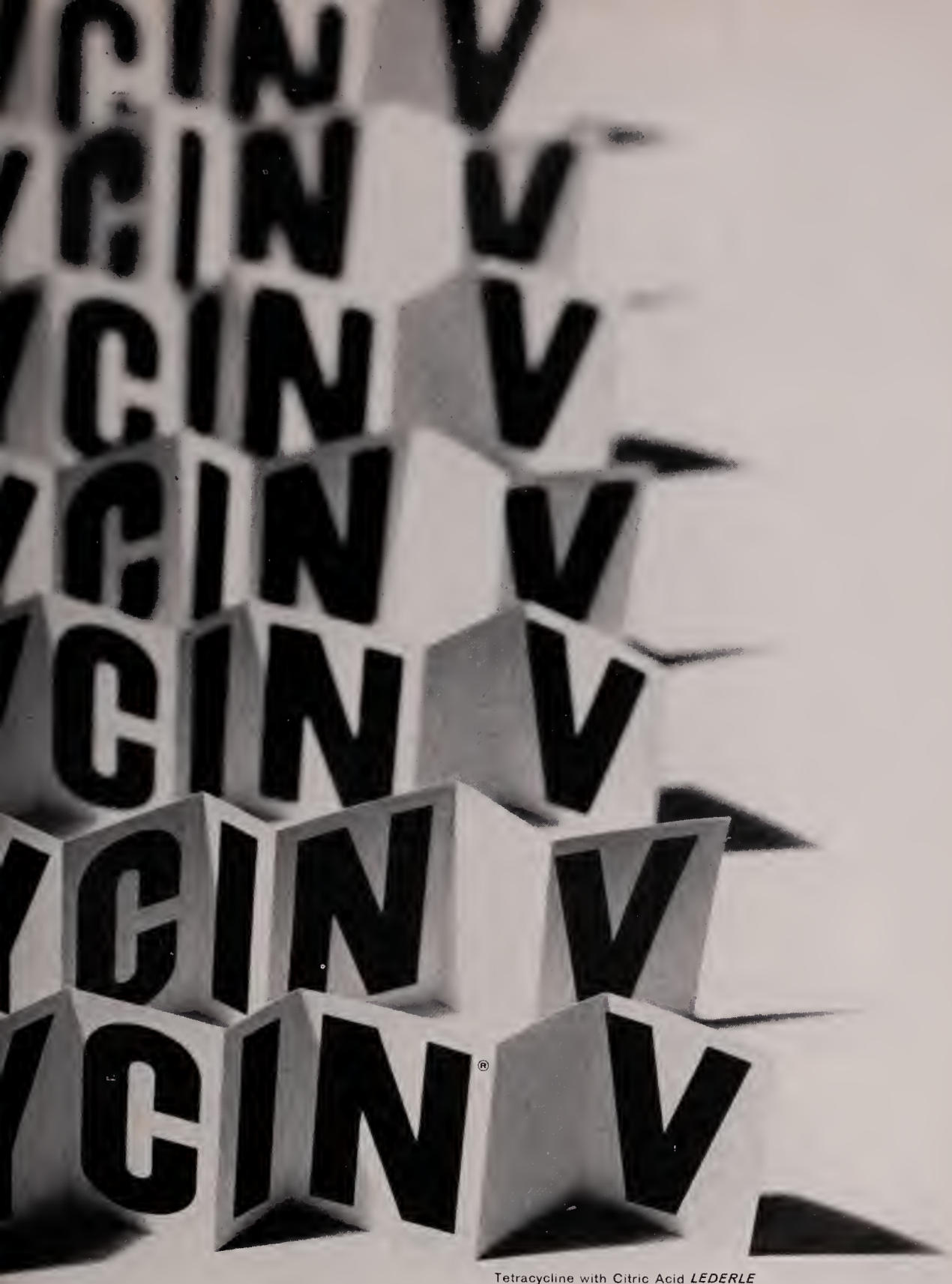
Miltown®

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets.

WALLACE LABORATORIES, New Brunswick, N. J.

CM-8043

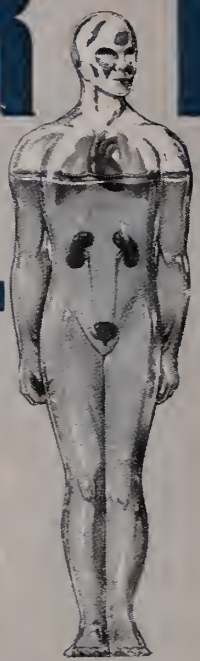

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Tetracycline with Citric Acid *LEDERLE*

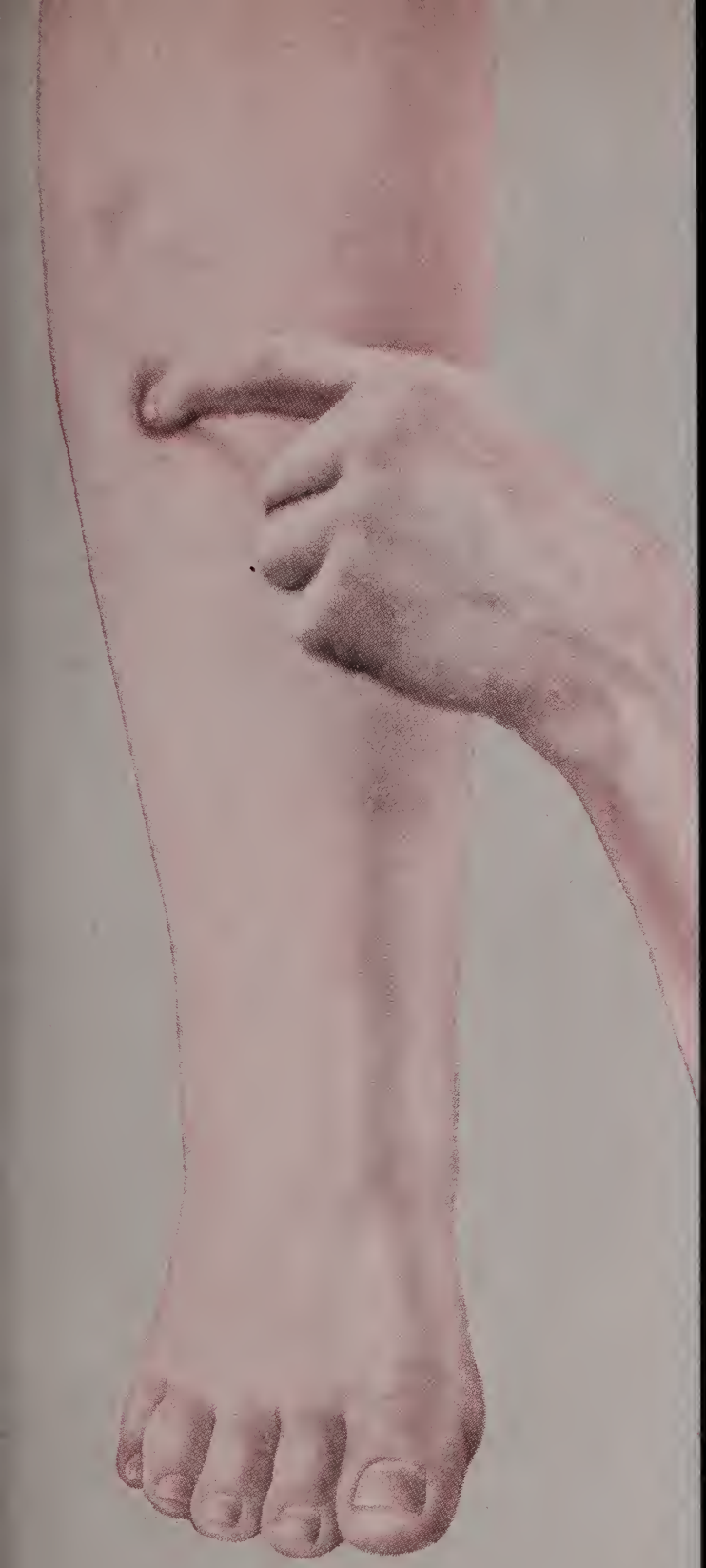
LE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York Lederle

WHATEVER THE ETIOLOGY—



EDEMA OF ANY DEGREE RESPONDS TO DIURIL®

CHLOROTHIAZIDE



An unparalleled record of safety and efficacy.

DIURIL has proved to be highly effective in overcoming edema associated with a wide variety of fluid retention states including: hypothyroidism, menopausal syndrome, allergy, peripheral phlebitis, arthritis, migraine headache, ascites or peripheral edema due to malignant tumor, and obesity. In the last case, Landes and Peters[1] achieved excellent to good results in nine obese patients in whom overweight was associated with moderate or severe fluid retention.

1. Landes, R. P. and Peters, M.: Postgrad. Med. 23:648, June 1958.

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REFERENCES: 1. Adams, J.: Advantages of combined tetracycline-oleandomycin therapy in common infections, J. Tennessee M. Assoc. *50*:446 (Nov.) 1957. 2. Andersson, B.: Pulmonary abscess cured with antibiotics, Opuscula Medica, *2*:8 (Oct.) 1957. 3. Anello, V. J., and Gerschenfeld, D. S.: Staphylococcal septicemia in a child: Treatment with a combination of oleandomycin and tetracycline, Dia med., B. Air. *30*:1921 (July 28) 1958. 4. Arneil, G. C.: Tetracycline-oleandomycin treatment of acute respiratory disease in childhood, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., October 1958, to be published. 5. Arrigoni, G.; Grignani, G. C., and Varesi, M.: A new antibiotic association in the treatment of urologic infections, Minerva med. *48*:2701 (Aug. 25) 1957. 6. Baccaredda Boy, A., and Cappelli, E.: Clinical study of the activity of a new antibiotic preparation, Signenmycin, in skin conditions of infectious (pyogenous) origin, Minerva med. *48*:2690 (Aug. 25) 1957. 7. Bergdahl, U.: Clinical experiences with a so-called double-spectrum antibiotic, Signemycin. Svenska Lakartidningen *55*:1715, 1958. 8. Blundi, E.: Use of Signemycin in a chest clinic, to be published. 9. Bolognesi, C.: Preliminary results of the use of Signemycin in certain otorhinolaryngological infections due to pyogenic organisms, Minerva med. *48*:2693 (Aug. 25) 1957. 10. Brodhage, H.: Bakteriologische in-vitro-versuche mit einer kombination von tetracyclin und oleandomycin (Signemycin). Praxis 26:579, 1957. 11. Calvi, A.: Antibiotics in the therapy of influenza and its pulmonary complications, to be published. 12. Carter, C. H., and Maley, M. C.: Application of tetracycline-oleandomycin in clinical practice, Antibiotics Annual 1956-57, New York, Medical Encyclopedia, Inc., 1957, p. 51. 13. Castellanos, A.: Signemycin in pediatrics, to be published. 14. Chiappara, P.: A case of sepsis with multiple osteomyelitis treated with a new antibiotic, Minerva med. *48*:2697 (Aug. 25) 1957. 15. Chiarenza, A.: Observations on the effects of Signemycin in nongonococcic urethritis, Minerva med. *48*:2692 (Aug. 25) 1957. 16. Cimmino, A.; Boni, A., and Orsi, N.: Antibiotic activity of oleandomycin-tetracycline combination. *In vitro* study on 332 strains of *Micrococcus pyogenes* var. *aureus* clinically isolated. Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, pp. 708-715. 17. Cooper, J.; Sprogis, G. R.; Heinemann, M., and Feirer, G. M.: Therapy of amebiasis carriers with oleandomycin-tetracycline (Signemycin), Antibiotic M. *5*:302 (May) 1958. 18. Cornbleet, T., and Firestein, B. Z.: Use of oleandomycin-tetracycline (Signemycin) for acne, Antibiotic M. *4*:598 (Oct.) 1957. 19. Cupples, J. F. B., and Perry, A. W.: Acute staphylococcal endocarditis treated with tetracycline-oleandomycin successfully, Canad. M. Assoc. J. *77*:699 (Oct.) 1957. 20. Davis, W. G.: Report on tetracycline and oleandomycin used in combination. Clinical Review & Research Notes, *1*:21-23 (April) 1958. 21. DeRomana, J.; Zaldivar, C., and Falcone, F.: Actual therapeutic conduct in the treatment of osteomyelitis, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 22. Durrieu, C. A.; Rodriguez, J. B., and Petrella, E.: The use of oleandomycin-tetracycline in buccal surgery, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 23. English, A. R.; McBride, T. J.; Van Halsema, G., and Carlozzi, M.: Biologic studies on PA-775, a combination of tetracycline and oleandomycin with synergistic activity, Antib. & Chemo. *6*:511-522 (Aug.) 1956. 24. Farah, L.: Some therapeutic indications of Signemycin, Medicina, Mex. *783*:519 (Nov.) 1957. 25. Faz Tabio, H.: Severe enterosepsis treated with Signemycin, Rev. cubana pediat. *29*:3 (May) 1957. 26. Faz Tabio, H.: Signemycin in the treatment of certain diseases of the respiratory tract, Rev. cubana pediat., *30*:219 (Apr.) 1958. 27. Febles, D., and Biderman, I.: Antibiotic management of acute infections in the obstetric patient, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 28. Felder, J.: Signemycin in der padiatrie, Schweiz. med. Wschr. *88*:953 (Sept. 27) 1958. 29. Fiora, F., and Compa, F.: The combination antibiotic oleandomycin-tetracycline (Signemycin) in acute blennorrhagia, Dia med. B. Air. *30*:570 (Apr. 3) 1958. 30. Florio, I., and Scoppetta, F. P.: Sigmamicina ed occlusione intestinale sperimentale, Bulletin med. & surg. soc., Pavia, *71*:1, 1957. 31. Foradori, M.: A case of meningitis due to *Staphylococcus aureus* complicating tubercular meningitis, treated successfully with Signemycin, Minerva med. *48*:2707 (Aug. 25) 1957. 32. Frank, L., and Stritzler, C.: Newer antibiotics in the treatment of acne. Antibiotic M. *4*:419 (July) 1957. 33. Friedrich, K., and Hammerl, H.: A new treatment for bacterial infection with an antibiotic combination, to be published. 34. Gemma, G. B.; Mel, C., and Bachi, V.: First experiences with Signemycin in surgical infections, Minerva med. *48*:2643 (Aug. 25) 1957. 35. Gilley, E. W.: Clinical appraisal of tetracycline and oleandomycin used in combination, to be published. 36. Hagan, H., and Scheffler, H.: Preliminary clinical experience with oleandomycin and the double-spectrum antibiotic, Signemycin, Medizinische, *14*:477 (Apr. 6) 1957. 37. Harris, H. J.: Tetracycline and oleandomycin (Signemycin) in chronic brucellosis, to be published. 38. Hasenclever, H. F.: Comparative *in vitro* studies of hospital strains of *Staphylococcus aureus* with oleandomycin, tetracycline and an oleandomycin-tetracycline mixture, Antibiotic M. *5*:14-25 (Jan.) 1958. 39. Hegglin, R.: Ornithosis, Schweiz. med. Wchnschr. *3*:64, 1958. 40. Henne, H. F.: Clinical experiences with the double-spectrum antibiotic Signemycin, Med. Klin., Berl., 29:1267-1270 (July 18) 1958. 41. Heredia Diaz, J.; Saavedra Zavaleta, G.; Robles, M. A., and Aguilar, D. L.: Tetracycline-oleandomycin (Signemycin) in the treatment of puerperal infections, Medicina, Mex. *38*:308, 1958. 42. Hoffmann, H.: Clinical experiences with the broad-spectrum antibiotic, Signemycin, Medizinische, *45*:1850 (Nov. 8) 1958. 43. Hoz Fabra, J.: Preliminary results of a clinical trial with Signemycin, Rev. clin. espan. *67*:101 (Oct. 31) 1957. 44. Kaiser, J. A.; Mazzarino, C.; Bajek, E. M., and P'an, S. Y.: Oleandomycin-tetracycline: Toxicity in experimental animals. Antibiotics & Chemother. *7*:255-259 (May) 1957. 45. Kanee, B., and Cockcroft, W. H.: Clinical and bacteriological studies on Signemycin (oleandomycin-tetracycline) ointment, Canad. M. Assoc. J. *78*:614 (Apr. 15) 1958. 46. Keil, P. G.; Tieszen, R. L., and Solomon, R. J.: An evaluation of Signemycin in the treatment of pneumonia, to be published. 47. Klovstad, O.: Signemycin "Pfizer" a combination of oleandomycin and tetracycline, Tidsskr. norske laegefor *15*:681 (Aug.) 1957. 48. Kohler, H. F.: Case report of the month: chronic osteomyelitis, Clinical Review & Research Notes, *1*:16 (Apr.) 1958. 49. Kraljevic, R., et al.: Investigation of the therapeutic value of the combination of tetracycline and oleandomycin, Antibiotic M. *5*:364-371 (June) 1958. 50. Kraljevic, R.: Discussion of the paper by Florentin and Sison (The role of antibiotics in Asian Influenza). Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 948. 51. Kraljevic, R.; Pearson, E., and Borgano, J. M.: Combined oleandomycin-tetracycline therapy in respiratory tract and other infections, to be published. 52. LaCaille, R. A., and Prigot, A.: Combinations of oleandomycin with oxytetracycline and tetracycline in soft-tissue infections. Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 67. 53. Levi, W. M., and Kredel, F. E.: A clinical trial of Signemycin, South Carolina M. J. *53*:178 (May) 1957. 54. Lewis, H. M.; Frumess, G. M., and Henschel, E. J.: Treatment of skin infections with tetracycline and oleandomycin, Rocky Mountain M. J. *54*:806 (Aug.) 1957. 55. Lopez, A. V., and Cohen, H. J.: The clinical trial of a combination of tetracycline hydrochloride and oleandomycin (oral suspension) in the treatment of severe pulmonary infections in children, to be published. 56. Loughlin, E. H., and Mullin, W. G.: Combined antibiotic therapy of tropical infections with Matroterra and Signemycin, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, p. 698. 57. Loughlin, E. H., and Mullin, W. G.: Combined antibiotic therapy of tropical infections with PA-765 and PA-775, Antibiotics Annual

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1956-57, New York, Medical Encyclopedia, Inc., 1957, p. 63. 58. McCloud, L. C.; Shidal, W., and Mulligan, J. L.: Clinical observations on infections treated with a combination of tetracycline and oleandomycin, to be published. 59. McFadden, H. W., and Schelhart, D.: Comparison of the *in vivo* sensitivity of micrococci to oleandomycin, tetracycline and a combination of oleandomycin and tetracycline. Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, pp. 514-519. 60. Manara, G., and Gasparetto, A.: The first clinical experience with water-soluble Signemycin, University of Padua, Minerva chirurgica *13*:535 (May 15) 1958. 61. Medina Morales, F.: The combination of tetracycline-oleandomycin (Signemycin) in the postoperative treatment of three cases of pulmonary resection, Medicina, Mex. *800*:347, 1958. 62. Mehra, B. K.: Combating the resistant staphylococci, Current Med. Pract. *1*:326-328 (May) 1957. 63. Mendiola, R.; Naranjo, R., and Briseno, F.: New contributions to the treatment of tuberculosis, Medicina, Mex. *37*:269 (June 25) 1957. 64. Mendoza Diez, J.: Treatment of osteomyelitis with Signemycin, Thesis, Universidad Nacional Mayor de San Marcos, Facultad de Medicina, Lima, Peru, 1957. 65. Moggian, G.: Preliminary results of a new antibiotic association in obstetrics and gynecology, Minerva med. *48*:2648 (Aug. 25) 1958. 66. Molinelli, E. A.; Vera Barros, E., and Ithurralde, D.: Tetracycline-oleandomycin in human brucellosis therapy, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, pp. 692-697. 67. Montilli, G., and Avellino, M.: Experienze con una nuova associazione di antibiotici (tetraciclina ed oleandomicina) in terapia dermatologica, Dermatologia *9*:3, 1958. 68. Morador, J. L., and Morador, S.: Cause, prevention and treatment of staphylococcal infection in hospitals, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 69. Morador, J. L., and Tate, L. S.: Treatment of 52 cases of infections caused by coagulase-positive staphylococci with a combination of oleandomycin and tetracycline, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, pp. 702-707. 70. Morador, J. L., and Tate, L. S.: The treatment of anorectal infections with Signemycin, An. Ateneo Clin. Quirur. *1*:52 (Jan.) 1958. 71. Morel, A. S.: Surgical infections: a guide to therapy, Clinical Review & Research Notes *1*:18-21 (July) 1958. 72. Morey, G. S.: Infections in nursing babies due to *Pseudomonas aeruginosa (B. pyocyaneus)* alone or associated with other organisms, Rev. Hosp. nino, *72*:3, 1958. 73. Oates, J. K.: Trial of Signemycin in non-specific urethritis, Brit. J. Vener. Dis. *34*:38, 1958. 74. O'Herlihy, F. C.: A clinical trial with Signemycin, Medical Press (London), p. 897 (Sept. 17) 1958. 75. Olmer, J., and Casanova, P.: Therapeutic notes: Clinical trials of Signemycin in the treatment of 59 patients, Semaine hop. Paris, Vol. 34, no. 2 (Feb.) 1958. 76. Ottolenghi, C. E.; Frigerio, E. R., and Soto Jimenez, D.: Combined antibiotic therapy in 35 cases of osteomyelitis, Bol. y trab., Soc. cir. Buenos Aires, *41*:739, 1957. 77. Pagola, J. G.; Benavides, L., and Heredia, A.: An evaluation of tetracycline-oleandomycin in the treatment of epidemic typhus, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 78. Pavone, M.; Anello, A., and Macaluso, M. P.: Signemycin in the therapy of infections of urinary passages, to be published. 79. Perez Villasante, G.: Postoperative treatment of the ear cavity, An. Soc. Mexico de Otorinolaringologia, No. *34-35*:175 (May-Aug.) 1957. 80. Prokop, O.: On the question of staphylococcus infections resistant to therapy, Der Praktische Arzt, *12*:145 (Feb. 15) 1958. 81. Quarti, M.: Efficacy of the association of oleandomycin and tetracycline in staphylococcal infections, Aggiornamento Pediatrico, *8*:11, 1957. 82. Quirno, N.; Fukelman, R., and Achaval, M.: Treatment with oleandomycin-tetracycline of infections observed in clinical practice, Dia med. *30*:2938 (Nov. 17) 1958. 83. Ragazzini, F.; Moggi, P., and Acocella, M.: First clinical applications of Signemycin in pediatrics, Minerva med. *48*:2667 (Aug. 25) 1957. 84. Randig, K.: Some experiences with Signemycin, Deutsches med. J. *8*:447 (Aug. 15) 1957. 85. Rebelledo, L. M., and Heredia, D. J.: Further clinical studies of an association of tetracycline and oleandomycin in the treatment of various infections, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 86. Rentchnick, P.: A combination of broad-spectrum antibiotics, Medecine et Hygiene, *379*:562 (Nov. 30) 1957. 87. Revelli, E., and Durando, C.: Treatment of the nonspecific inflammatory component of tuberculosis of the female genital organs, Minerva med. *48*:2658 (Aug. 25) 1957. 88. Rivera, J. A.; Brame, R. E., and Osborne, D.: Sensitivity of *Micrococcus pyogenes* from burned patients to the action of oleandomycin. The emergence of resistance to this antibiotic, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 89. Rondanelli, E. G.: The therapeutic problem of orchitis by parotitic virus, Institute of General Clinical Medicine and Medical Therapy of the University of Pavia, Bulletin med. & surg. soc., Pavia, *71*:1, 1957. 90. Saavedra Amaro, S., and Lopez Zepeda, L.: Comprobacion clinica de la Signemycin en el tratamiento de infecciones diversas, to be published in Medicina, Mex. 91. Sanchez Creus, P.: Los antibioticos de indicaciones limitadas, Rev. clin. espan. *69*:378 (June 30) 1958. 92. Sangiuolo, F.: Therapeutic action of the tetracycline-oleandomycin (Signemycin) association, Minerva med. *48*:2679 (Aug. 25) 1957. 93. Santas, A. A.; Ganora, H. M., and Brea, C. M.: Antibiotic prophylaxis in thoracic surgery, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 94. Schenone, H.: Genitourinary infections treated with the antibiotic combination tetracycline and oleandomycin, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 95. Shubin, H.: Clinical evaluation of combined chemotherapy, oleandomycin and tetracycline, Antibiotic M. *4*:174 (March) 1957. 96. Signer, A., and Vinci, G. G.: Signemycin in the healing of wounds, Arch. Societa Med-Chirurg. Messina, Vol. II, 1957. 97. Smazal, S. F., and Crowley, P. J.: Routine use of the antibiotics tetracycline and oleandomycin in combination for the treatment of infections represented in an unselected series of general office patients, to be published. 98. Steinman, E.: Trial of an antibiotic combination as a routine agent for treatment of infections in office practice, to be published. 99. Stritzler, C., and Frank, L.: Significance of the response of acne vulgaris to antibiotics, Antibiotic M. *5*:109 (Feb.) 1958. 100. Talbot, J. R.: Experience with an antibiotic combination (tetracycline-oleandomycin) used routinely for anti-infective therapy in an office practice, Wisconsin M. J. *57*:237-238 (June) 1958. 101. Tato, J. M.; Galli, L. A.; Rechniewski, C.; Arauz, S.; Games, J.; Bello, J.; de Sebastian, G., and Bergaglio, O.: Treatment of chronic sinusitis with a combination of oleandomycin and tetracycline, Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 675. 102. Willcox, R. R.: Tetracycline and oleandomycin in combination in nongonococcal urethritis, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, p. 672. 103. Willcox, R. R.: The treatment of nongonococcal urethritis with tetracycline and oleandomycin in combination (Signemycin), Medical Press (London) (Dec. 11) 1957. 104. Willemot, J. P., et al.: Signemycin in the treatment of pulmonary infections, Bruxelles med. *38*:1026 (June 22) 1958. 105. Winton, S. S., and Chesrow, E. J.: A clinical study of combined chemotherapy. Antibiotics Annual 1956-57, New York, Medical Encyclopedia, Inc., 1957, p. 55. 106. Wittmoser, R.: Hospitalismus, Chirurgische Praxis, *3*:281 (Sept.) 1957. 107. Zaldivar, C. G., and Falcone, F.: Preliminary results in osteomyelitis with tetracycline and the phosphate of oleandomycin (Signemycin), Rev. Hosp. nino *18*:151 (June) 1957. 108. Zaldivar, C. G.: Complicated forms of chronic osteomyelitis, Rev. Hosp. nino *72*:315 (Dec.) 1957.

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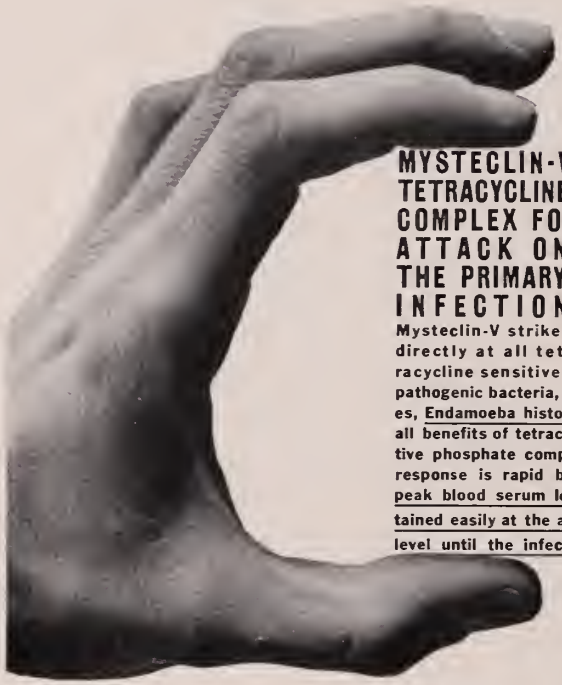
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References: 1. Crunk, G. A.; Naumann, O. E., and Casson, K.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia Inc. 1958, p. 397 • 2. Newcomer, V. D.; Wright, E. T., and Sternberg, T. H.: Antibiotics Annual 1954-1955, New York, Medical Encyclopedia Inc., 1955, p. 686.

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		"marked"	moderate	slight	none
Carpenter[1]	33	26	6	1	—
		"pronounced"			
Forsyth[2]	58	37	20	—	1
		"good"			
Lewis[3]	38	25	6	—	7
O'Doherty &		"excellent"			
Shields[4]	17	14	2	1	0
		"significant"			
Park[5]	30	27	—	2	1
		"gratifying"			
Plumb[6]	60	55	—	—	5
TOTALS	236	184 (78.0%)	34 (14.4%)	4	14

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REFERENCES: 1. Carpenter, E. B.: Southern M. J. 51:627, 1958. 2. Forsyth, H. F.: J.A.M.A. 167:163, 1958. 3. Lewis, W. B.: California Med. 90:26, 1959. 4. O'Doherty, D. S., and Shields, C. D.: J.A.M.A. 167:160, 1958. 5. Park, H. W.: J.A.M.A. 167:168, 1958. 6. Plumb, C. S.: Journal-Lancet 78:531, 1958.

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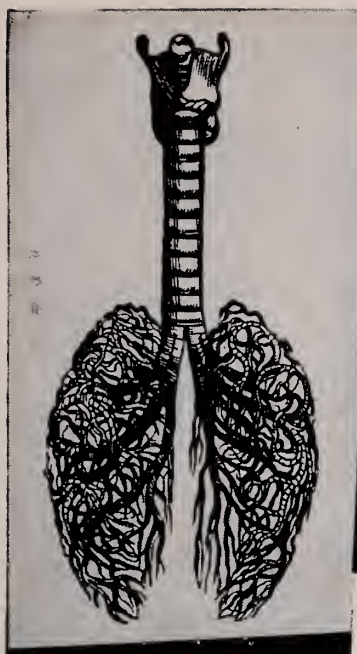
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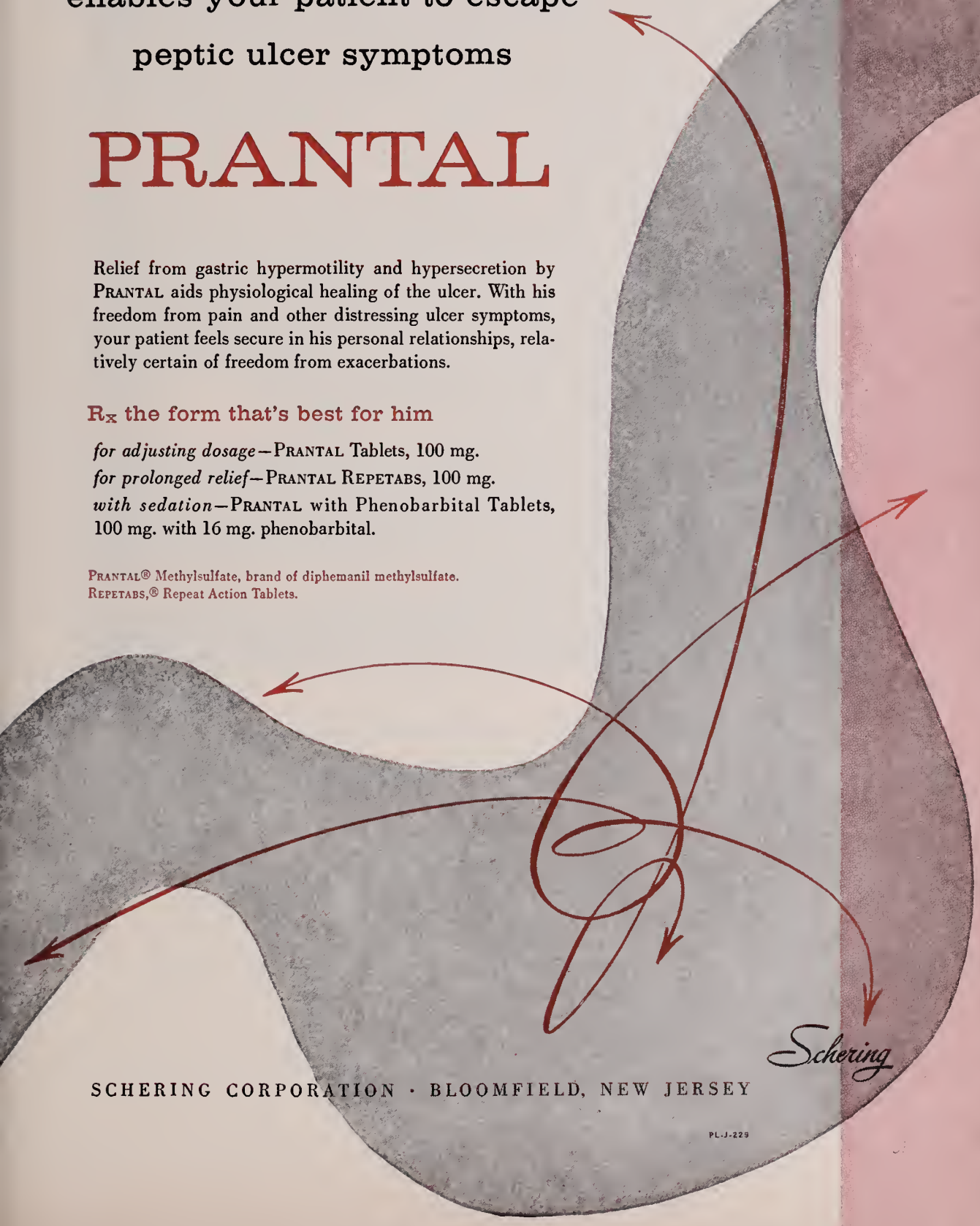
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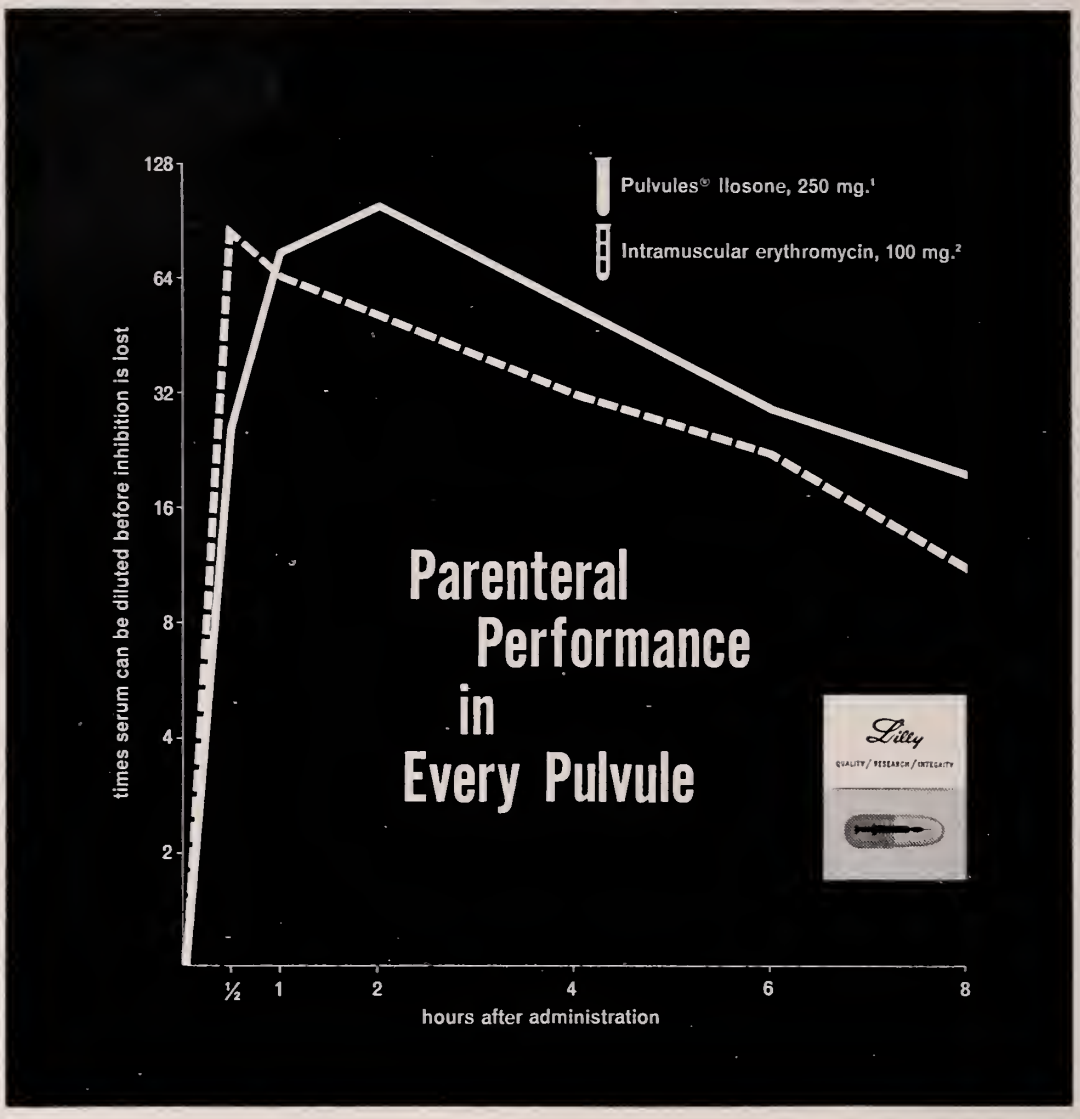
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1. Antibiotic Med. & Clin. Therapy, *5*:609, 1958.
2. Data from Antibiotics Annual, p. 269, 1954-1955.

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Guest Editorial . . . .

Problems of the Aged and Aging

SHORTLY after the last annual meeting of The Medical Society of Virginia, Dr. Adams, the President, appointed a committee to study the problems of the Aged and Aging, and report ways and means by which the medical profession in Virginia could help alleviate these problems.

By the time this item reaches you, the President of each constituent medical society will have been asked to appoint a local committee to help the state committee carry out its work.

The problems that these senior citizens have are many. Not all of them are medical by any means. Yet their health is so often markedly influential in determining their abilities to produce and provide for themselves, and in deciding so many factors of importance to their well being, that it is quite essential they be assured of as good health as is possible.

You are probably aware that this issue has become one of political importance. But the most serious and overriding fact to us is whether the medical problems inherent in the situation can be worked out in a sufficient time and solution to allow the medical profession to control the medical care of these people. The Federal Government is pushing hard, with union and liberal element backing, to give "free" medical care via the Forand bill which is coming up again. This bill would provide "free" hospitalization and care up to 60 days a year for everyone who is eligible for social security. I feel certain that you would not set the fee you would collect in these cases. And if you haven't thought of this, it is interesting to note that practically all branches of medicine except pediatrics would be called on to provide this care.

Some of our oldsters can provide for their own medical care, but don't know where to turn. Others can only provide these expenses at a cost of reduced food, housing and other necessities. Many of these people can be put back to gainful employment with a minimum of medical care. Many of them would be better off at work. Providing ways to determine their illnesses and correct them so that they may once again become useful citizens should be Medicine's number one target.

Adequate facilities to determine diagnoses and provide treatment for these people should be undertaken by local medical societies, working with local health departments, hospitals, welfare agencies and governing boards. Where available, local general medical clinics and special clinics may do much to screen and treat all candidates for nursing homes, potential employables and welfare cases.

It is the belief of this Committee that a goodly number of these people, if properly screened, diagnosed and treated, may be returned to usefulness, removed from the tax rolls and hospital beds, and given a new lease on life. It is also our belief that for most effective fulfillment such a program must be sponsored, produced and managed by physicians of each locality.

Harry C. Bates, Jr., M.D., *Chairman*
Committee on Problems of Aging

Skin Grafting in Severe Burns

B. W. HAYNES, Jr. M.D.
Richmond, Virginia

UNTIL APPOXIMATELY 15 years ago, patients receiving severe burns commonly expired within the first 24 to 48 hours in shock. The work of Harkins,[1] Cope and Moore,[2] Evans, Purnell, Robinett, Batchelor and Martin[3] placed the early fluid and electrolyte management of the severely burned patient on firm ground, resulting in the present day use of formulae to approximate the fluid requirements for the individual patient. As a result of the efforts of these and other individuals, the early management of the severely burned patient is now much more successful, by virtue of a better understanding of what constitutes proper fluid, colloid, and electrolyte therapy.

The problem of the successful management of the burn wound is more difficult, and particularly so if extensive areas of third degree burn are present. Many patients, who in previous years would have died during the first day, are now living 10 days or longer, but dying of complications related to the wound rather than inadequate fluid and electrolyte therapy. The problem of extensive dead tissue on the body, plus added infection, constitutes the largest problem in the treatment of burns. Emphasis placed upon the expeditious removal of the burned tissue and early skin grafting to secure healing constitutes the basic approach to the management of the burn wound. Methods used on the Burn Service at the Medical College of Virginia Hospital to accomplish this end are detailed below.[4]

PREPARATION OF THE WOUND FOR SKIN GRAFTING

Basically, the management of the burn wound is designed to (1) prevent or minimize infection, (2) secure expeditious removal of dead and devitalized tissue, and (3) to provide early skin grafting. These objectives may be accomplished by either the open (exposure) method or the closed (dressing) method. Initially, in either case, the burn wound is treated under sterile conditions with adequate cleansing, using a detergent such as pHisohex and saline solution to remove dirt and debris. All blisters are excised and devitalized epithelium removed. These steps convert the wound from a contaminated to a surgically clean one. It must be emphasized that wound treatment is given only after adequate shock therapy has been instituted. Once the wound is properly cleansed and debrided, the treatment of choice is carried out.

Exposure Method. In burns of the face and neck, genitalia, perianal area, and burns limited to one side of the trunk only, the exposure method is preferable. The wound is exposed to air and allowed to dry. As the wound dries, a crust is formed consisting of a fibrin clot originating from the plasma-like fluid which weeps from the wound. As this eschar matures, it becomes a mahogany color, is firm and dry, and, if unbroken, provides an excellent dressing beneath which second degree burns heal rapidly. Cracks in the eschar permit bacteria to enter and cause infection. Should infection occur, it must be drained adequately by local debridement and application of ointment gauze, changed frequently. The eschar usually separates in 10 to 14 days, leaving a healed wound beneath. If the eschar does not separate in 2 to 2½ weeks' time, this is generally indicative of a third degree burn which will require excision of dead tissue and subsequent skin grafting.

Dressing Method. In carrying out the closed or dressing method of treatment, strips of dry fine mesh gauze are placed in single layer thickness directly on the wound. This is followed by a thick padded dressing, generally one to two inches in depth, to provide adequate sterile area for drainage to accumulate without soaking the dressing through. If the dressing becomes soaked through, it provides a means of entrance of pathogenic organisms to the wound by means of multiplication and extension through the protein rich exudate. If the burn crosses a joint area, the part is splinted. If the hand is burned, the fingers are wrapped individually with dry gauze, a soft gauze roll is placed in the palm, and the hand is dressed in the position of function. Prophylaxis against streptococcal infection is achieved by penicillin and streptomycin therapy, usually given for a minimum of 5 days. Established infection is treated on the basis of antibiotic sen-

From the Department of Surgery, Medical College of Virginia, Richmond, Virginia.
Presented at the Annual Meeting of The Medical Society of Virginia, October 12-14, 1958, in Richmond.

sitivity tests. Tetanus prophylaxis is routine, either as antitetanus serum given after negative skin test, or tetanus toxoid booster dose.

Dressings are left undisturbed for 10 to 12 days, at which time second degree burn will be healed for the most part and the third degree burn will be demarcated. If, at the time of the first dressing, the dry fine mesh gauze is tightly stuck and dry, it is undisturbed, and a protective dressing re-applied. If it is moist, indicating infection beneath, it is removed and the wound cleansed. Under ordinary circumstances the change of dressing can be accomplished with average pre-operative medication without the use of general anesthesia. Trilene is helpful for pain associated with dressing and has a wide margin of safety. The unhealed wound is dressed with an ointment impregnated gauze whose purpose is to prevent sticking to the granulation tissue forming beneath and to allow adequate drainage of the wound through the interstices of the gauze. A thick, absorbent, sterile dressing is then applied. This process is repeated at intervals of 5 days to a week until the wound is healed or until, in third degree burns, a clean granulating surface is obtained. Ordinarily, a clean wound ready for grafting can be obtained within one month from injury. If the patient has an obvious well-localized third degree burn, he may be treated by surgical excision under anesthesia in order to expeditiously remove the dead tissue. Under these circumstances, it is rarely wise to carry out skin grafting immediately because of the difficulty in distinguishing living and dead subcutaneous tissue, and continued bleeding is occasionally a problem. Following excision and hemostasis, an ointment impregnated gauze dressing is applied. Skin grafts are then taken and stored in sterile jars in the refrigerator. Adequate blood replacement during the operation is essential. Five days later the dressing is changed, further debridement carried out as indicated, and skin grafting performed at this time, using grafts taken at the original operation.

The basic principle involved in all of these maneuvers is the removal of dead tissue either by body enzymatic processes and/or surgical debridement in order to secure a healed wound or a clean healthy wound receptive to grafting.

It is important that the patient is in good nutritional condition, having received adequate amounts of protein and calories prior to operation, and that his hemoglobin concentration is within a normal range before grafting is performed. In the severely burned patient, a total of 2 to 4 gms. of protein kg/day and 40-50 calories kg/day may be required. Additional protein and calories to the hospital diet supplied as supplementary liquid feedings are usually necessary and are begun as soon as practicable, usually by the 3rd day after injury.

TECHNIC OF SKIN GRAFTING

With the patient anesthetized, the donor site and wound are prepared by thorough cleansing with sterile soap and saline washing, and draped appropriately.

The Use of Large Split-thickness grafts. Split-thickness type grafts are used. These grafts are taken from available donor sites at varying depths depending upon the age of the patient and the size of the burn. In children, grafts are ordinarily cut from 8 to 12/1000 of an inch in depth, whereas in adults 14 to 18/1000 of an inch. In the extensively burned patient with a large area of third degree burn requiring grafting, it is often wise to cut the grafts extremely thin, perhaps 8/1000 of an inch, anticipating re-using the donor site again in order to gain sufficient skin to cover the defect. To accomplish removal of the grafts, the Brown electrodermatome is a simple instrument for the purpose. Minimum experience is required to use the machine well. The thighs offer the best donor sites available on the body, and long strips of skin may be cut from this area. Hemostasis is acquired by hot packs and pressure. We have found it useful to place a single layer strip of vaseline gauze backing on each graft with the gauze trimmed exactly to fit the graft. This step is useful since it provides ease of handling of the graft by preventing rolling of the skin margins. Vaseline gauze backing does not interfere with graft take. As a rule, the strips of skin are placed on the individual defect so that the graft junctures lie in the transverse plane of the body. Since increased scarring occurs at the juncture of the grafts, this maneuver places the long axis of the scar in the transverse plane and thus minimizes the effects of contracture on joint function. By the same reasoning, the use of large sized grafts with minimum graft junctures is best. Perforations of the graft to allow serum escape are unnecessary for good healing. This practice increases scarring, and causes a rough appearance of the graft.

Absolute hemostasis. An essential of technic is to secure absolute hemostasis in the site to be grafted. If granulations are excessive or fibrotic, if some slough still remains, it is necessary to excise these tissues to secure a healthy bed for grafting. This

may be done either by shaving the granulations with a sharp long knife, or by scraping them off with a knife handle. Hemostasis is accomplished by hot packs and pressure which may require 20 to 30 minutes to complete. Occasional bleeding points may require suture ligatures of 4-0 plain catgut. It is essential that the time necessary to accomplish this end be spent, since bleeding beneath the graft preprevents graft healing. Hematomata are a common cause of failure of graft "take" and are preventable.

Immobilization of Graft. Once the grafts are placed, steps must be taken to assure that they are immobilized in position. The necessary step may vary from simply laying the graft on the wound to placing sutures in the normal skin surrounding the graft and tying these over a stent. The latter method is best adapted to areas difficult to immobilize such as the axilla or neck. The former method is adaptable to circumferential burns of the extremities where a firm dressing can be applied without shifting the grafts. Parenteral penicillin is administered for 5 days following operation to prevent streptococcal infection in the grafted site.

Adequate Wound Drainage Established by Dressing. Dressings are left undisturbed until 5 days after grafting. At this time they are removed, as are the sutures, and the vaseline gauze backing carefully separated from the grafts. Any devitalized graft is excised and the wound cleansed and freed of exudate, thus establishing adequate drainage. If there are hematomata or seromata beneath any part of the graft, a small incision is made into this area and the clot or serum evacuated. An attempt is made to save the graft overlying the hematoma if possible. We ordinarily anticipate getting 90 to 95% "takes" of grafts performed in this manner. An ointment impregnated gauze dressing is applied which remains in place for 5 more days. At this time, if healing is progressing normally, some motion is allowed, progressing to a full range of motion and complete functional recovery.

RESTORATION OF FUNCTION

Usually by the 10th to 14th day following grafting, active and passive motion can be instituted which is a vitally important part of the patient's recovery. In extensive grafts, and in grafts of the hand, neck, elbows, and knees, the services of a trained physiotherapist to assist in accomplishing the complete functional recovery of the patient are essential. The long period of immobilization that the patient has gone through leaves him with a decreased range of motion in joint areas. This can be recovered in most instances only by diligent effort on the part of the patient and the physiotherapist.

SUMMARY

To assure successful skin grafting in severe burns, the following factors are believed to be of importance.

1. Early expeditious removal of dead tissue by dressings and excision to achieve a clean surgical wound.
2. Careful attention to the technic of skin grafting including (a) use of large split-thickness grafts, (b) absolute hemostasis, (c) immobilization of grafts, and (d) adequate wound drainage following operation.
3. Restoration of function by early intensive physiotherapy.

References

1. Harkins, H. N.: The Treatment of Burns. Thomas, 1942.
2. Moore, F. D. and Cope, O.: The Re-Distribution of Body Water and the Fluid Therapy of the Burned Patient. Ann. Surg. 126: 1010, 1947.
3. Evans, E. I., Purnell, O. J., Robinett, P. W., Batchelor, A., and Martin, M.: Fluid and Electrolyte Requirements in Severe Burns. Ann. Surg. 135: 804, 1952.
4. (A) Haynes, B. W., Jr.: Chapter 9, p. 154, Christophers Minor Surgery, Saunders, 1955
   (B) Haynes, B. W., Jr., Martin, M. M., and Purnell, O. J.: Fluid Colloid and Electrolyte Requirements in Severe Burns, An Analysis of Colloid Therapy in 158 Cases Using the Evans Formula. Ann. Surg. 142: 674, 1955.
   (C) Haynes, B. W., Jr.: Section on Burns, p. 709, Current Therapy, Saunders, 1958.

1200 East Broad Street
Richmond, Virginia

Sustained Release Sulfaethidole in the Treatment of Urinary Tract Infections

RALPH R. LANDES, M.D.
CHARLES L. RANSOM, M.D.
Danville, Virginia

MARSHALL[1] and Harries[2] have demonstrated that the most effective treatment with the sulfonamides or any other anti-bacterial agent can be expected only if therapeutic blood concentrations are continuously maintained for prolonged periods of time. Until recently, to attain these concentrations, sulfonamides had to be taken anywhere from 4 to 6 times a day. Because of the inconvenience inherent in regimens of this type, patients often failed to follow such a schedule, and, as a result, blood concentrations became sub-optimal, and therapy was less effective.

Recently, several sulfonamides have become available that reduce the number of daily doses, either because of inherent properties of the drug, or because of properties provided by the form in which the drug is prepared. One of these sulfonamides, sulfaethiodole [N_1-(5-ethyl-1, 3, 4-thiadiazole-2yl)-sulfanilamide] has been prepared as a sustained release liquid (Sul-Spansion) and tablet (Sul-Spantab), and has been reported to produce prolonged therapeutic blood levels and high urine concentrations on a schedule of only two doses a day.[3-8] These preparations are designed to release, upon ingestion, an amount of the drug that is necessary to establish therapeutic blood levels, and to maintain this level by a slow and continuous release of the remainder of the drug during succeeding hours. This prolonged action is a result of the pharmaceutical form of the drug; not of its pharmacologic properties (e.g. slow absorption or excretion). The following study was performed to evaluate the clinical efficacy of the sulfaethidole sustained release tablet* in the treatment of patients suffering from urinary tract infections.

METHODS

Eighty-seven private patients (28 male and 59 female) with infections of the urinary tract were treated during the evaluation. The patients ranged in age from 3 to 80 years (average age: 46), and complained of a variety of urinary symptoms, occurring singly or in combination, that included frequency of urination, dysuria, nocturia, incontinence, supra-pubic distress and flank pain. Results of urinalysis showed that all urine specimens contained pus and, in most cases, blood cells. Diagnoses (Table 1) were based on urological examination, symptomatology, and urinalysis.

Sulfaethiodole sustained release tablets were prescribed for all patients; no concomitant medication was used. Adults received 2 tablets (1.3 gm.) twice a day (q12h); children who weighed less than 75 pounds received 1 tablet (.65 gm.) twice a day. As with all sulfonamides, the initial or priming dose was twice that of succeeding doses. Because sulfaethidole is highly soluble over the usual pH ranges of urine, the use of alkalis or increased fluid intake was unnecessary. Additional urological procedures (urethral dilation or surgery) were required by 8 patients.

Therapy was continued for from 1 week (2 patients) to 8 weeks (1 patient); the average period of treatment was 2.6 weeks. Patients were examined at frequent intervals during the course of treatment.

Urine specimens were obtained from all patients at the time of their first examination and after the completion of treatment for routine urinalyses and bacterial culturing.

CLINICAL RESULTS

Evaluation of improvement was based on the disappearance of physical symptoms of infection and by the disappearance of blood and pus cells from the urine. Results were considered good when the patient became completely asymptomatic; fair when only partial remission of symptoms occurred; and poor when little or no improvement occurred. By these criteria, therapy yielded good results in 75 (86%) of the patients, fair results in 8 (9%) and poor results in 4 (5%) [Table I]. Those patients in whom good results were obtained usually experienced relief of their physical symptoms within 72

Sulfaethidole—formerly called Sulfaethylthiadiazole.

*Provided for investigational use by Smith Kline & French Laboratories, Philadelphia, Pennsylvania.

Table I

Results of Sustained Release Sulfaethidole Therapy Based on Clinical and Bacteriological Findings

Diagnosis	No. of Patients	Clinical Results			Bacteriological Results		
		Good	Fair	Poor	Good	Poor	Insuff. Data
Cystitis (recurrent, sub-acute and chronic)	38	30	5	3	20	12	6
Hemorrhagic Cystitis, acute	18	18	.....	.....	17	.....	1
Prostatitis	16	12	3	1	10	6	.....
Pyelonephritis, acute	9	9	.....	.....	5	2	2
Ureteral Stone with infection	2	2	.....	.....	.....	2	.....
Urethral Stricture with infection	1	1	.....	.....	1	.....	.....
Prostatic Carcinoma with infection	1	1	.....	.....	.....	1	.....
Non-Specific Urethritis	2	2	.....	.....	1	.....	1
Total	87	75 (86%)	8 (9%)	4 (5%)	54 (70%)	23 (30%)	10

hours. Seven to 10 days of treatment were required, generally, before significant clearing of the urine could be observed.

Three of the four patients who did not benefit from therapy were found to have either structural abnormalities of the urinary tract (urethral stricture) or chronic recurrent pyelonephritis. The remaining patient showed little or no improvement, and continued to have recurrences of acute cystitis.

No evidence of serious side effects—crystalluria, hematuria, renal blockage, skin eruption or any other allergic reaction—was found. Four patients stated that they experienced a loss of appetite, 3 complained of weakness, and 2 of headaches. These discomforts may or may not have been caused by the drug.

BACTERIOLOGICAL RESULTS

Bacteriological results were considered good when the original infecting organism had been eliminated from the urine. In 10 patients, no results could be determined since no infecting organisms were found in a pre-treatment culture. Post-treatment cultures obtained from the remaining 77 patients showed that the original infecting organism had been eliminated in 54 (70%) patients. Thirty-six of these 54 cultures were completely negative, while 18 indicated the presence of bacteria other than those that predominated in the original culture. Twenty-three (30%) cultures were positive for the original infecting organism.

DISCUSSION

The results of this study indicate that sulfaethidole is a safe, effective, chemotherapeutic agent in the treatment of urinary tract infections. The prolonged action of the sustained release form has obvious advantages in terms of convenience and efficacy. Of importance to us was the absence of any severe side effects, particularly those associated with renal function. The rapid excretion and low acetylation rate of the drug, reported by Foltz et al[8], may be responsible for the absence of these complications.

Bacteriological results were obtained in only 77 patients because of negative growths reported in 10 pre-treatment cultures. Our failure to achieve positive results in these cultures may have been due to the limitations imposed by laboratory methods as reported by Arnold[9], who found that the success rate of obtaining positive cultures is directly related to the method used and it may vary from 28% to 87%. The success rate of our pre-treatment results, 89% positive cultures, agrees with Arnold's findings, and suggests that repeat cultures are advisable in cases where the original report is negative.

Eighteen of the final urine cultures revealed the predominance of organisms other than those which were present in the initial cultures. As Kass[10] points

out, these positive results may have been due to contamination. It is also possible that these organisms were strains that had been suppressed by overgrowth of the initial infection or that they were secondary invaders of the urinary tract. In any case, the presence of these bacteria seems to have had little effect on the final outcome of therapy since no recurrence of disease has been reported by any of the patients in whom good clinical results were obtained.

Since these sources of error may also be responsible for the disparity between our clinical and bacteriological results (86% and 70% good respectively), we are inclined to agree with Harries and Mitman[11] that the efficacy of sulfonamide therapy is best judged by clinical improvement.

SUMMARY AND CONCLUSIONS

1. A sustained release tablet form of sulfaethidole was used in treating 87 private patients suffering from infections of the urinary tract.
2. Clinical results showed that 75 (86%) of the patients had a good response to therapy, 8 (9%) fair, and 4 (5%) poor response.
3. Bacteriological results showed that the infecting organisms were eliminated in 54 (70%) of the 77 patients on whom enough data were available for comparison.
4. No severe side effects (e.g. crystalluria, hematuria, renal blockage) were reported or discovered.

References

1. Marshall, E. K.: The Significance of Drug Concentration in the Blood as Applied in Chemotherapy. McLeod, C. M. ed. Evaluation of Chemotherapeutic Agents. Columbia University Press, New York, 1949, pp. 3-24.
2. Harries, E. H. R., and Mitman, M.: Clinical Practice in Infectious Diseases. E. & S. Livingstone, Ltd., Edinburg, 1951, p. 532.
3. Daeschner, C. W., Clark, J. L., and Yow, E. N.: A Comparative Evaluation of Sulfonamides, J Pediat. 50: 531-551 (May) 1957.
4. Farquhar, J. D.: Evaluation of Sulfaethylthiadiazole (SETD) in Common Infectious States in Children, J. Pediat. 50: 150-195 (February) 1957.
5. Viek, N., Campbell, E. W., Gislason, G. J., and Bondi, A.: Sulfaethylthiadiazole (SETD) Therapy for Simple and Complicated Urinary Tract Infections. J. Urol. 77: 777-781 (May) 1957.
6. Bishoff, R. J., and Mercer, E. H.: A New Sustained Release Antibacterial Preparation in General Practice, presented as a Scientific Exhibit, 106th Annual Meeting of the American Medical Association, New York, N. Y., June 3-7, 1957.
7. Sablosky, L.: A Clinical and Laboratory Evaluation of Sulfaethylthiadiazole (SETD) in Sustained Release Dosage Forms. Antibiotic Medicine and Clinical Therapy 3: 729-734 (November) 1957.
8. Foltz, E. L., Swintosky, J. V., and Robinson, M. J.: Absorption, Distribution, and Fate of Sulfaethylthiadiazole Administered Orally and Intravenously. Fed. Proc. 15: 422 (March) 1956.
9. Arnold, J. H.: The Urine Culture, Medical Records and Annals 47: 395-397 (January) 1953.
10. Kass, E. H.: Chemotherapeutic and Antibiotic Drugs in the Management of Infections of the Urinary Tract, Am. J. Med. 18: 764-781, (May) 1955.
11. Harries, E. H. R., and Mitman, M.: op. cit. p. 635.

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Tuberculosis

Tuberculosis as a cause of death has dropped from first to 13th place in the past half century, but one new case is reported every five minutes in the United States. This fact is revealed in the current issue of *Patterns of Disease,* prepared by Parke, Davis & Company for the medical profession.

In the past 20 years alone the number of tuberculosis deaths has dropped about 80 per cent. The number of newly reported cases, however, has declined only about 20 per cent during this period.

This publication stresses the need for more intensive drives to detect the disease. For every known case, it reports, there is one unknown tuberculous person. Total number of known and unknown cases (both active and inactive TB) in the U.S. is estimated at 800,000.

"To eradicate tuberculosis, the disease must be detected and treated early, while lesions are small and readily amenable to therapy." Yet, for the past five years, only about 22 per cent of newly reported active and probably active cases have been in the early stage. In 1956, about 20 per cent of persons who died of tuberculosis had not been previously reported as having the disease.

Primary Ovarian Malignancy

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THE INSIDIOUS ONSET, the oft times rapid growth, and spread before significant signs and symptoms of the process became manifest, make ovarian malignancy a distressing and disheartening disease entity to effectively treat. The medical literature is filled with discouraging reports on ovarian malignancies of all types, with reports of five year survivals ranging from 9.3% to 35%.[1,3] Ovarian carcinoma is said to be the third most frequent genital malignancy[3], and according to some authors[1], seems to be definitely increasing in incidence. With these facts in mind, it was deemed advisable to make an effort to appraise the diagnosis, treatment, and to a limited extent, the results of therapy, of primary malignancies of the ovary, at the Medical College of Virginia Hospitals.

During the years 1953 to 1957 inclusive there were 7354 admissions to the gynecological service of the Medical College of Virginia hospitals. During this same period of time we were able to uncover fifty one cases of primary ovarian carcinoma of all types, an incidence of 6.9 cases per one thousand admissions. The likelihood of a woman of 40 years, subsequently developing ovarian carcinoma is nearly one per cent (.930), and gradually diminishes thereafter according to Randall and Gerhardt[4], which has an important bearing on the question of early diagnosis of ovarian malignancy.

One of the simplest and best classifications of ovarian neoplasms is that outlined by Munnell, Jacox, and Taylor[1], which lists these tumors according to their histogenetic origin by the recognition of four simple groups: *viz*, the epithelial tumors, the connective tissue tumors, the mixed tumors, and tumors of specific gonadals cells, or the so-called dysontogenetic tumors. Two of these same authors[2] in 1949 proposed a classification of ovarian malignancies according to the extent of the disease, based on four simple stages, (Table I) which together with the classification of ovarian tumors, has been utilized in this report. As in the majority of reports on this subject, our study revealed a preponderance of papillary serous cyst adenocarcinoma, followed by pseudomucinous cystadenocarcinoma, undifferentiated carcinoma, granulosa cell carcinoma, dysgerminoma, and the rarer types of malignancies. (Table II)

Table I
Stages of Carcinoma of Ovary

Stage I	Carcinoma Limited To One Ovary.
Stage II	Carcinoma In Both Ovaries.
Stage III	Carcinoma Involves Other Pelvic Structures.
Stage IV	Carcinoma Spread To Upper Abdomen Or Elsewhere Outside Pelvis.

Table II
Primary Ovarian Malignancies
Medical College of Virginia Hospitals
1953-1957

Types	
Papillary Serous Cystadenocarcinoma	31
Pseudomucinous Cystadenocarcinoma	5
Undifferentiated Carcinoma	5
Granulosa Cell Carcinoma	3
Dysgerminoma	3
Hypernephroid Carcinoma	1
Mesonephric Carcinoma	1
Teratoma	1
Squamous Cell Epithelioma in Dermoid Cyst	1
Total	51

The clinical stages of the tumors revealed an equal number of stage I and stage IV growths, and about the same relationship between stage II and stage III neoplasms. (Table III) The youngest

Table III
Stages of Primary Ovarian Malignancies in Relation to Type of Malignancy

	Stage I	Stage II	Stage III	Stage IV
Papillary Serous Cystadenocarcinoma	13	5	3	10
Pseudomucinous Cystadenocarcinoma	3		1	1
Granulosa Cell Carcinoma	3			
Hypernephroid Carcinoma	1			
Mesonephric Carcinoma	1			
Undifferentiated Carcinoma				5
Dysgerminoma				3
Teratoma				1
Epithelioma in Dermoid Cyst				1
Totals	21	5	4	21

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patient in this series was 15 years of age and the oldest 71. It is interesting to note that fifteen of these cancers occurred in women under forty years of age, and that five of those were classified as stage IV growths. (Table IV) The papillary serous

Table IV

Age and Stage of Primary Ovarian Malignancies

Decade	No. of Cases	Stage I	Stage II	Stage III	Stage IV
10–20	1				1
21–30	6	4			2
31–40	8	3	3		2
41–50	12	5	2	2	3
51–60	12	5		1	6
61–70	10	4			6
71–80	2			1	1
Totals...	51	21	5	4	21

cystadenocarcinoma were encountered from the third through the eighth decade with the majority of them occurring from the fourth decade on. The five cases of pseudomucinous cystadenocarcinoma occurred in the fifth and sixth decades, while the five cases of undifferentiated or unclassified carcinoma were distributed one each from the fourth decade. Two of the three granulosa cells carcinomas were found in patients in the seventh decade, with one being encountered in a patient in her thirties. Dysgerminoma, supposedly an early occurring malignancy was not apparent until the sixth and seventh decades in two cases and was found in a 21 year old girl in the third instance. The malignant teratoma was found in a fifteen year old child, and the mesonephric carcinoma in a woman in her late twenties, while the hypernephroid carcinoma and the squamous cell epithelioma is a dermoid cyst both occurred in patients in the fifth decade. (Table V)

Abdominal pain was present in over half the cases, while just under one half of the patients also complained of abdominal enlargement. Weight loss, abnormal vaginal bleeding, urinary symptoms, vaginal discharge, and abdominal pressure made up the remainder of the complaints. In only two cases were there no symptoms of the disease prior to definitive treatment. (Table VI) All of these patients

Table VI

Signs and Symptoms of Primary Ovarian Malignancies

Abdominal Pain	37
Abdominal Enlargement	22
Abdominal Pressure	10
Abnormal Vaginal Bleeding	13
Genito-Urinary Symptoms	12
Weight Loss	13
Vaginal Discharge	8
No Symptoms	2

were subjected to surgery because of the presence of an abdominal and/or pelvic mass. Eleven of the patients were found to have ascites prior to surgery, and ten of those are now known to be dead. Six of the patients were diagnosed as having carcinoma of the ovary elsewhere, six of them were diagnosed at operation, five were unsuspected until the condition was discovered by the pathologist, and thirty-three cases were diagnosed pre-operatively in this institution. In one case there was no statement concerning the time of the diagnosis. Papanicolaou smears were utilized in five cases, two of them being reported as positive for tumor in aspirated ascitic fluid, and three being negative.

The therapy of ovarian carcinoma in this institution has consisted chiefly of total abdominal hysterectomy and bilateral salpingo-oophorectomy in those cases considered to be amenable to surgical treatment. In instances of stage III and IV tumors, exploratory laparotomy and biopsy of the lesion or lesions followed by irradiation therapy has been employed. In some of these advanced cases removal of all involved tissue, including omentectomy, followed by x-ray therapy has been used. The employment of chemotherapeutic agents, such as nitrogen mustard and its derivatives, tri ethylenemelamine (TEM) and thio-

Table V

Age and Type of Primary Ovarian Malignancies

Decade	P.S.C.C.	P.C.C.	U.C.	G.C.	Dys.	Hyp.C.	Mes.C.	Ter.	Sq.C.
10–20								1	
21–30	4				1		1		
31–40	6		1	1					
41–50	8	1	1			1			1
51–60	6	4	1		1				
61–70	6		1	2	1				
71–80	1		1						
Totals...	31	5	5	3	3	1	1	1	1

triethylene phosphoramide (thio-TEPA) are in the process of being evaluated. Bateman[5], and Shay and Sun[6] have reported encouraging temporary results from the use of thio-TEPA in the treatment of advanced carcinoma of the ovary.

Only eight of the cases in this small series have been followed for five years. Seven of those eight patients are now dead, the only survivor being a patient with a stage I granulosa cell carcinoma that was discovered accidentally at operation for uterine fibroids. Thirty of the entire series of patients have died since treatment, which of course, represents a very poor survival rate. Three of the patients in this series have been lost to follow-up, but one of them has been presumed dead. The largest number of deaths occurred in patients with stage IV tumors, of whom 90% have already demised. Fifty per cent of the stage III tumor patients are already dead, forty per cent of the stage II cases and one third of the stage I carcinomas. (Table VII)

Table VII

Deaths

	Stage I	Stage II	Stage III*	Stage IV
Papillary Serous Cystadenocarcinoma	4	2	2	9
Pseudomucinous Cystadenocarcinoma	1			1
Unclassified Carcinoma				4
Granulosa Cell Carcinoma	1			
Dysgerminoma				3
Hypernephroid Carcinoma				
Mesonephric Carcinoma	1			
Malignant Teratoma				1
Epithelioma in Dermoid Cyst				1
Totals	7	2	2	19

*One of the Stage III tumor cases has been lost to follow-up and is presumed dead of carcinoma.

The chief concern of those managing these patients is, of course, survivals. As previously stated we have only one five year survival out of eight candidates. These figures in general follow the clinical stage of the disease, with the highest number of survivors occurring in the least extensive tumors, as one would expect. (Table VIII) It should be emphasized that these figures mean very little at this time since we have not reached the end of the five year survival time in but a small group of patients. Also there are many reports in the literature of so-called late recurrences of this disease, well beyond the five year survivals. The histologic grading of the tumors has been shown to be of some significance in prognosis, in addition to the extent of the growth, and the type of tumor being dealt with. Thus one would expect a higher percentage of survivors in the more highly differentiated types of tumor than in the undifferentiated ones, given the same degree of local extension, and depending on the type of new growth. While again these figures mean very little for several reasons, this fact seems to be borne out in our observations since only one out of five of the undifferentiated carcinomas have survived to date.

Table VIII

Survivals

Type of Tumor	Stage I	Stage II	Stage III	Stage IV
Papillary Serous Cystadenocarcinoma	7	3	1	2
Pseudomucinous Cystadenocarcinoma	2		1	
Granulosa Cell Carcinoma	2			
Undifferentiated Carcinoma	1			
Totals	12	3	2	2

Of the twelve stage I survivors, three received surgery plus irradiation, and nine were treated by surgery alone. (Table IX) Two of the stage II lesions were treated by the combined method, while one case did not receive any irradiation therapy. The two stage III survivors were divided as to the method of treatment. There can be little surprise in the fact that the stage IV survivors received the works. One of these has survived less than a year, while the other has survived 3-4 years. (Table X)

In discussing what can be accomplished in improving our results in this group of patients, emphasis must be placed on early recognition of the malignant process, as it is in consideration of all types of malignancies. Little would be gained by broaching the subject of prophylactic ocphorectomy at this time. Certainly the proponents and opponents of this practice both have valid arguments on their side. We should delve further into the necessity for and the practicality of more frequent routine pelvic examinations on our patients. These examinations, plus the intelligent management of ovarian neoplasms, bearing in mind the consistency of the neoplasm, its mobility, size, and extent, in addition to the age, childbearing status, and general condition of the patient, seem to offer the chief hope for the early detection and cure of ovarian malignancies. To date there are no specialized laboratory tests that

Table IX

Survivals According to Method of Treatment

	Surgery and Irradiation*				Surgery Alone			
	Stage I	Stage II	Stage III	Stage IV	Stage I	Stage II	Stage III	Stage IV
Papillary Serous Cystadenocarcinoma	2	2	.....	2	5	1	1	.....
Pseudomucinous Cystadenocarcinoma	1	.....	1	.....	1	.....	.....	.....
Granulosa Cell Carcinoma	.....	.....	.....	.....	2	.....	.....	.....
Undifferentiated Carcinoma	.....	.....	.....	.....	1	.....	.....	.....
Totals	3	2	1	2	9	1	1	.....

*Three cases received Thio-tepa or radio-active gold intra-peritoneally in addition to other therapy.

Table X

Periods of Survival as Related to Stage of Tumor and Method of Treatment

	Surgery and Irradiation				Surgery Alone			
	Stage I	Stage II	Stage III	Stage IV	Stage I	Stage II	Stage III	Stage IV
Less than 1 yr	1	1	.....	1	2	.....	.....	.....
1–2 yrs	2	.....	1	.....	1	1	.....	.....
2–3 yrs	.....	1	.....	.....	1	.....	1	.....
3–4 yrs	.....	.....	.....	.....	3	.....	.....	.....
4-5 yrs	.....	.....	.....	.....	2	.....	.....	.....
Totals	3	2	1	2	9	1	1	0

will aid us in picking up early ovarian cancer, hence we must rely on our clinical acumen, patient, and inter-professional cooperation to improve the dismal picture now presented by ovarian malignancies.

Realizing that some ovarian neoplasms, while still quite localized can metastasize widely, we must still insist on routine pelvic checkups. The question of timing of these checkups poses a serious problem. Yearly examinations might prove too infrequent, even in the younger group of women, since in our series, thirty of our patients had symptoms less than 6 months. Yet the practicality of having one's patient obtain a routine examination every six months, when she is feeling well, is not very great. However, if every female patient would have periodic pelvic, and other examinations, our figures in this and other types of malignancies, would of necessity be vastly improved; and the more frequently the examinations are made, the more often early lesions will be discovered. At the same time the overemphasis on cancer phobia must be deplored, but rather the female public should be calmly and sanely urged to maintain their general health through periodic examinations. It goes without saying that no examination of a female patient is complete, that does not include pelvic examination. Too often there are instances of patients being treated for gastro-intestinal or other disorders, only to subsequently find, often times too late, that the primary lesion is in the pelvis.

On discovering an adnexal mass, the proper procedure from that point on, depends on several factors. Should the mass be cystic and under five centimeters in diameter, the patient can be observed at rather frequent intervals. Growth of the cystic mass should result in exploratory laparotomy. The finding of any type of solid ovarian tumor demands immediate exploration of the patient. Tumors of large size, whether cystic or not should be removed as promptly as possible. Doubt in the mind of the physician concerning the characteristics of the ovarian lesion, whether he be specialist or family doctor, calls for consultation in the interest of the patient.

In the case of women, at, during or past the menopause, a little more radical outlook is called

for. Just before, during, and shortly following the climacteric more frequent checkups are required. The finding of any type of ovarian growth in those women past the menopause indicates laparotomy and removal, since dysfunctional cysts do not occur in that group of women, and endometrial cysts should have regressed following the menopause. Women during the climacteric may be subject to dysfunctional and endometrial cysts, as well as uterine growths such as fibromyoma which may be difficult at times to distinguish from ovarian new growths. In this group also, a more radical approach may be made to their problem, since the childbearing function does not have to be considered usually. The same general statements can be made of those women just preceding the climacteric.

In summary, then, we, as physicians, should strive for periodic general and pelvic checkups on our female patients, preferably at six monthly intervals, but certainly at least yearly. These should be made more frequently just preceding, during, and following the menopause. The intelligent management of adnexal masses, when discovered, with the liberal use of consultation, when indicated, combined with periodic examination on a frequent enough basis, should aid in the early detection of ovarian growths.

Bibliography

1. Munnell, E. W., Jacox, H. W., and Taylor, H. C., Jr.: Am. J. Obst. & Gynec. 74: 1187, 1957.
2. Munnell, E. W. and Taylor, H. C., Jr.: Am. J. Obst. & Gynec. 58: 943, 1949.
3. Hesseltine, H. C. and Smith, R. L.: Am. J. Obst. & Gynec. 72: 1326, 1956.
4. Randall, C. L. and Gerhardt, P.: Am. J. Obst. & Gynec. 68: 1378, 1954.
5. Bateman, J. C.: New England J. Med. 252: 879, 1955.
6. Shay, H. and Sun, D. C. H.: Cancer 8: 498, 1953.

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Crash Diets for Athletes

Crash diets and drying out by high school wrestlers and boxers trying to make a certain weight class are to be condemned, according to the American Medical Association's Committee on Injury in Sports. In a statement in the January 26 AMA News, the committee, along with the National Federation of State High School Athletic Associations, called for an unannounced "weighing in" at the beginning of the season. A boy should remain throughout the season in the class established for him at the "weighing in." The groups also suggested an increased number of weight classes for athletes to minimize the advantage of making a certain class.

Many schools have interscholastic wrestling, but only two states (Idaho and Oregon) permit interscholastic boxing in high school.

Boys going on crash diets several times a year to make weight classes led to the statement.

"Under the strong motivation and appeal of sports, the diets and drying out may be carried to great extremes. Such efforts are not consistent with the spirit of sport in that they tend to defeat regulations designed to insure fair and equitable competitions."

The crash diets, "sometimes approaching the starvation level," also are condemned from a health standpoint. "Disturbing the fluid balance of the body by drying out holds serious health hazards."

"These dangers are intensified in the immature organism of the growing adolescent athlete. They are also intensified by periodic weighings which encourage the athlete to resort to such practices at frequent intervals during the season."

Under the present system in which crash diets are used, an athlete may be competing in a class below that in which he rightfully belongs, or a boy competing in his proper class may be pitted against much heavier boys who "made" the weight below their real class.

No plans of classification of athletes is infallible, but they believe their recommendations "provide the best guarantee of equitable competition with a healthful experience for the participants."

Management Of Recent Midfacial Fractures

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IN THIS PRESENTATION, we will consider those midfacial fractures which, we have observed, have sometimes been overlooked and underestimated, or in which there has been a delay in recognition of the extent of the injury. Treatment, therefore, has not been satisfactory because of the influence of these various factors and, in addition, in some instances, because the initial examiner has been reluctant to advise that his patient, especially if a child, be subjected to an operative procedure under general or even local anesthesia.

Massive soft tissue and bony injuries, not infrequently encountered, will not be considered, for the diagnosis and need for treatment in this group are quite obvious and urgent. In this paper, the cases excluded are those with multiple facial lacerations, multiple general body injuries, cerebrospinal rhinorrhea, severe hemorrhage, and shock.

In the midfacial injuries, we will include those with minor lacerations, contusion, ecchymosis, and edema of the overlying and intranasal soft tissues, masking more consequential cartilaginous and bony trauma. That this type of disability is misjudged, for the various reasons mentioned, is apparent enough to us to justify this presentation.

The bones involved are mainly those of the nose, roof of the mouth, ethmoid and maxillary sinuses, and floor of the orbit.

These injuries are usually incurred in athletic contact, transportation mishaps, falls—particularly in cases of children—and altercations. Often, from the history, the force responsible for the disability will not be considered sufficiently severe to cause a significant injury. This is misleading to the initial examiner and the patient, so that after the swelling has subsided, the resulting deformity and malfunction are disclosed, and it will be evident that the contact has not been as harmless as previously thought.

A knowledge of the symptoms and signs produced by fracture displacement of this group of facial bones and cartilages is important and should be emphasized. Examination of these cases may be accomplished without the need for any special instruments. They will be listed with brief additional comments. (Table 1)

1. *Cutaneous Soft Tissue Reaction.* Edema and swelling of the contused and lacerated tissues occur very rapidly, thus precluding early accurate evaluation of the status of the underlying facial bones. The degree of this reaction is of no real consequence, as it will disappear with time. Displaced fractured bones will be significant, however. (Fig. 1).



Fig. 1. Apparatus for reduction of fractures of the nose and maxilla. Note edema and ecchymosis.

2. *Subconjunctival Hemorrhage and Ecchymosis.* The presence of this type of hemorrhage, especially in the lower half of the eye, is highly suggestive of fracture involving the floor of the orbit. (Fig. 2).

3. *Diplopia.* Double vision in certain fields is also indicative of a fracture displacement involving the bones composing the orbital cavity and, secondarily, the extrinsic ocular muscles. This disability is very rarely a permanent one if the treatment is correctly performed without too much delay. The testing for diplopia in the various fields of vision

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Fig. 1 has been utilized in a previous publication, the Southern Medical Journal 42: 3, March, 1949.



Fig. 2. Fracture of right malar-maxillary area. Note subconjunctival hemorrhage and depressed deformity of right malar area.

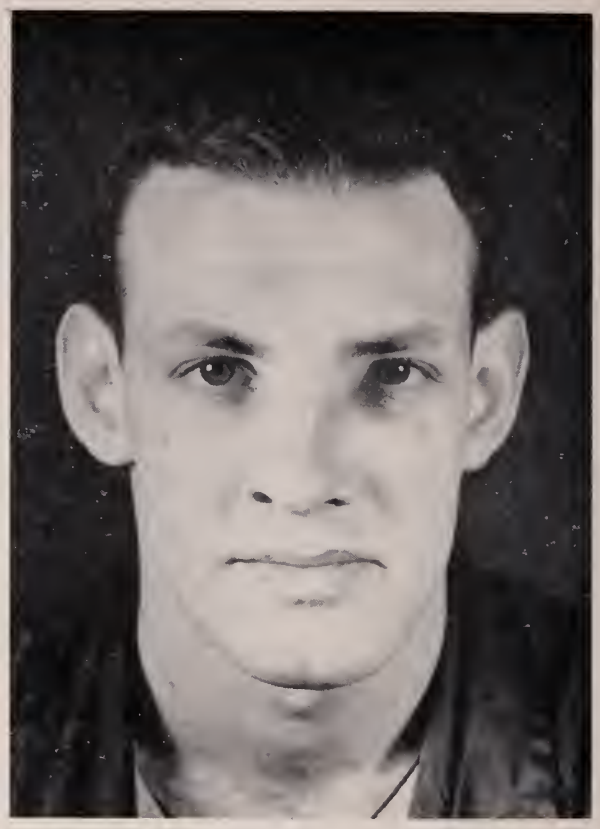


Fig. 3. Fracture displacement nasal bones. Reduction as outpatient, local anesthesia.

is a simple procedure and should be carried out in the event of any midfacial or cranial trauma.

4. *Deformity.* Flattening of the cheek region, depression or lateral deviation of the nose, or interruption of the continuity of the orbital ridges may be visually noted or palpated beneath the soft tissue swelling. (Figs. 2 and 3).

5. *Nasal Obstruction.* Unilateral and/or bilateral obstruction to the nasal airway may be the result of displaced osseous and cartilaginous structures composing the nose. However, edema and hemorrhage into the soft tissues of the nose may be responsible for the obstruction, particularly in children. It is important to determine the cause of this obstruction, for prompt evacuation of a hematoma may prevent cartilage destruction and infection, the results of which are difficult to correct in subsequent secondary reconstructive and plastic procedures.

6. *Epistaxis.* Nasal bleeding immediately after the occurrence of the trauma is evidence that the nasal mucous membranes have been lacerated. Later slight postnasal bleeding indicates laceration of the mucous membranes of the sinuses, mainly the antra. The cavity is emptied slowly by gravity and by the action of the cilia.

7. *Anaesthesia.* A lack of sensation or numbness of the skin of the cheek and/or of the upper teeth will indicate a fracture of the maxilla involving the second division of the fifth nerve. Sensation usually returns after a period of some weeks.

8. *Dental Malocclusion.* A fracture displacement of the maxilla, with or without involvement of the teeth-bearing alveolar process per se, may result in malalignment of the teeth so that there is not the identical contact present as prior to the accident. Dental malocclusion indicates a fracture which may not be initially evident to the examiner. This point can be promptly established by properly questioning the patient.

9. *Less Common.* (a) Subcutaneous emphysema after blowing the nose. (b) Limitation of motion of the lower jaw, which is secondary to masseter muscle contusion or spasm and possibly to the encroachment of a depressed zygomatic arch upon the coronoid process of the mandible. (c) Pain which, surprisingly enough, is not a major complaint.

The establishment of the complete diagnosis is aided by radiographic studies of the facial bones. In fact, full facial bone x-rays probably should be obtained in all except the most minor type of injuries

and all in which legal and insurance implications are anticipated.

We have learned from experience that roentgenograms of the zygomatic arches and of maxillae (Waters and basal views) are indispensable in establishing the full diagnosis and in planning the treatment. Those of the nasal bones are less important, for the clinical impression is of more value here than anything else. Also, it must be recalled that depending upon the type of healing, older fracture lines of the nasal bones may be confused with newer ones over an infinite period of time. Again, a point of interest is that fractures of the midfacial bones in preschool children (minus 6 years of age) are rare; the resulting injuries are more commonly those of the soft tissues and the cartilages of the nose. The gravity of neglected hematomas in this area has been previously mentioned.

MANAGEMENT

Lacerations should be closed primarily as promptly as possible. After careful cleansing, the edges of the wound are approximated with fine sutures, the material usually being silk (5 or 6 zero). If possible, existing fractures should be reduced at the same time, but this is not absolutely necessary. We often receive patients from a distance, referred for definitive treatment of the fractures after the lacerations have been repaired. Also, on many occasions, one wishes to delay reduction of the fractures until after repair of the lacerations, in order that plans may be made for treatment of the bony injuries. This brings up the time factor in the management of fractures.

Clinical fibrous union of fractures of the midfacial region takes place normally within three weeks or a few days in excess after the injury, those not involving the teeth-bearing alveolar process, the shorter time. The union is fibrous in nature except in the rare areas where the bony fragments are approximated exactly end to end, where it may be osseous.

It has been our experience that one can satisfactorily reduce the vast majority of fractures of the nasal, maxillary, and zygomatic bones within seven or eight days after the injury, and this can be done without resorting to any mechanism for traction upon the parts, etc. That is, once reduced, within this period of time, the fragments will remain in the proper position with minimal efforts for immobilization being necessary. After a period of from two to three weeks following the injury, reduction may be accomplished without too much difficulty; but immobilization of the fragments becomes more of a problem. In these instances, there is a tendency for the fragments to return to their displaced positions after the reduction. After three weeks, for reduction, forceful refracture of the part with definite measures to obtain immobilization and stabilization, becomes a necessity. After a prolonged period of time, say from four to five weeks plus, it is often advisable



Fig. 4. Old depressed nasal fracture requiring cartilage implant. Before and after.

to perform some type of plastic procedure, such as a rhinoplasty or the use of osseous implants or grafts to improve the function and appearance of the area. (Figs. 4 and 5).

circumstances. Instances of this type are exemplified in Figs. 3, 4, and 6. More complicated fractures require special equipment to immobilize the fragments, thus preventing broadening and depression



Fig. 5. Nasal deformity secondary to trauma requiring rhinoplastic procedure. Before and after.

It goes without saying that many midfacial fractures with minimal displacement or even moderate displacement, in the aged, require no manipulative procedure. We should like to mention a fact that we have repeatedly observed in fractures involving the antral cavities; fracture and comminution of the fragments are always more extensive than x-ray interpretation per se leads one to believe. We allow for this discrepancy in advising patients as to the need for reduction.

Further discussion of treatment will be divided into three categories: (1) Nasal Injuries; (2) Malar-Maxillary Fractures without and with Involvement of the Alveolar Processes; (3) Zygomatic Arch Fractures.

(1) *Nasal Injuries.*

As one would anticipate, nasal fractures and injuries to the soft tissues and cartilages of the nose are probably the commonest injuries incurred by individuals as a whole. The majority of nasal fractures may be very satisfactorily reduced by simple manipulation of the parts, manually and intranasally with instruments, under local or general anesthesia. This may be carried out on these cases either as inpatients or outpatients, depending upon the various

of the bony nasal complex (Fig. 1). This is rarely necessary, however. The majority of nasal fractures may be handled by the simple procedure of closed reduction. When this cannot be accomplished, then manipulation is delayed and carried out later by open reduction (rhinoplastic operations, Fig. 5). We often have difficulty in controlling the position of the septal cartilage, particularly in the cases of closed reduction, and not infrequently a secondary procedure is necessary to obtain an adequate airway.

Injuries to the nose in children offer special problems. First, soft tissue injuries are common in young children, injuries to the cartilages less so, and actual fractures of the nasal bones are even rarer. However, there is a tendency to minimize these injuries, from the physician's view point, and this may lead to errors in some cases. Adequate examination should be accomplished by one familiar with the nasal anatomy of children, regardless of the difficulties encountered with the very young. Hematomas of the septum and lateral nose should be evacuated.

(2) *Fractures of the Malar (Zygomatic) and Maxillary Bones.*

In view of the position and anatomy of these cheek bones, they will be considered together, as a com-



Fig. 6. Fracture displacement of nasal bones. Reduction under general anaesthesia.

bined fracture of the two often occurs with trauma directed to this region. One frequently encounters an inward and downward displacement of the malar bone, with secondary comminution and displacement of the bones involving the superior (floor of the orbit), anterior, and lateral walls of the antral cavity. (Figs. 7 and 8). In our opinion, this type

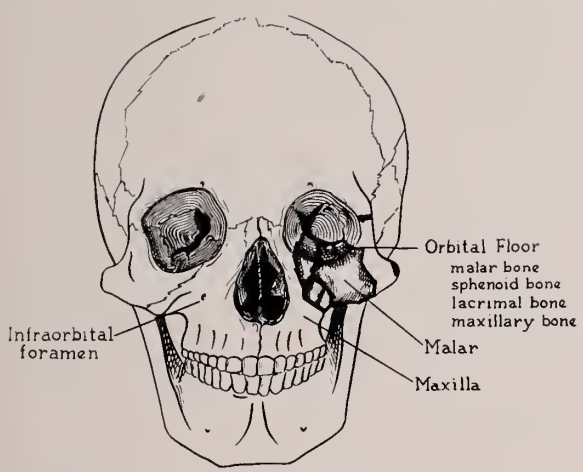


Diagram Illustrating Comminuted Fracture of Left Midfacial Bones

Fig. 7. Malar-maxillary fracture.

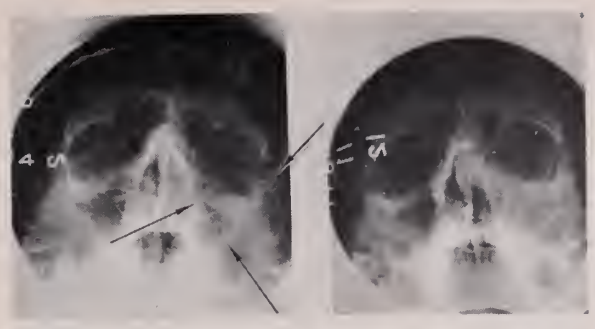


Fig. 8. Malar-maxillary fracture. Reduction by transantral approach. Before and after reformation of antral cavity.

of fracture may be simply and better reduced by a transantral (Caldwell-Luc) approach. The antral cavity is entered through an intraoral incision. Fragments of unattached bone and blood clots are removed from the disorganized cavity, and then by finger and instrument manipulation an effort is made to re-establish the correct anatomical conformity and limits of the cavity. If this is satisfactorily achieved, the fracture displacement must then be reduced. This reformation of the antral cavity, as practiced by the otolaryngologist, is the key to successful reduction of malar-maxillary fractures and to a favorable result without complications. An intra-antral packing of vaseline gauze may or may not be necessary for the purpose of immobilization. The packing, if needed, is usually led out of an intranasal antrostomy opening or, more rarely, through the intraoral incision. It is removed after having been left in situ for 12 to 14 days. Hospitalization during this entire period is not required.

Sometimes after approaching the fracture intraorally, as mentioned above, one finds less fragmentation and displacement of bone than had been anticipated. Reduction then may be carried out by upward and outward pressure exerted from beneath the malar bone at a point near the maxilla, without entering the antral cavity.

In the case of more extensive fractures involving bilateral malar-maxillary injuries, alveolar processes with malalignment of the teeth, old fractures, etc., the reduction procedure becomes more difficult and complex. Measures for obtaining reduction, immobilization, and traction, such as utilizing headcaps, dental splints, various types of skeletal pins, and even direct wiring of the fragments, may be necessary. (Fig. 9). Commonly, the simpler methods suffice; use of the others, though spectacular and impressive, is not often required. It is not our intent in this presentation to discuss these more complicated fractures.



Fig. 9. Fracture right maxilla requiring apparatus for immobilization.



Fig. 10. Fracture of zygomatic arch requiring reduction.

It should be mentioned that in fractures involving the antral cavity where packing is necessary, the establishment of a functioning inferior meatal antrostomy is desirable; and also, subsequently, further treatment to the cavity will minimize the disposition to future sinusitis or complaints referable to the sinuses.

(3) *Zygomatic Arch Fractures.*

Fractures of the zygomatic processes of the malar and temporal bones, composing the arch, are common and are the less difficult of the midfacial fractures to reduce. Fractures with only slight displacement need no treatment. Those with displacement to a degree that will interfere with the function of the mandible, or result in a facial deformity if not corrected, require reduction. (Fig. 10). This procedure is a comparatively easy one, accomplished through an external or intraoral approach. Usually, no mechanism for immobilization is necessary. Old fractures may require external traction, direct wiring of the fragments, etc., in order to obtain a satisfactory result. To repeat, complicated procedures are seldom needed in this type of fracture.

As has been previously mentioned, clinical fibrous union occurs in midfacial fractures in about three weeks, and in a slightly longer interval (four weeks) in a tooth-bearing alveolar process. Therefore, the fractured parts should be in a state of immobilization and/or guarded from trauma for this period of time.

SUMMARY

The management of midfacial fractures of the less severe type has been discussed with the intent of acquainting the nonspecialist in this field with some of the aspects of diagnosis and treatment. This presentation was prompted by the fact that even the reaction of the less serious injuries of the soft tissues will cover or mask an underlying bony one of some significance, thus leading to an incomplete or delayed diagnosis and evaluation of the entire picture. Conversely, severe injuries of the midfacial region involving the soft tissues receive prompt treatment, as it is necessary for this group of patients to be hospitalized immediately because of the obvious emergency nature of their disability.

Emphasis is placed on the existence of deformity, edema, epistaxis, regional dental and cutaneous anaesthesia, new malalignment of teeth, diplopia, hemorrhage into the tissues, and other less common

Table 1.

SYMPTOMS AND SIGNS OF MIDFACIAL FRACTURES

Soft Tissue Reaction
Subconjunctival Hemorrhage and Ecchymosis
Diplopia
Deformity
Nasal Obstruction
Epistaxis
Anaesthesia
Malocclusion of Teeth
Subcutaneous Emphysema
Trismus
Discomfort

signs, as evidences of fracture of the midfacial bones.

The permissible time or lapse between the injury and reduction of the fractures, to obtain the best results, is discussed.

Simplicity in the method of correcting the disability is desired over the more involved procedures; however, in the more complicated cases, the latter may be required.

In the vast majority of these injuries, if managed correctly, satisfactory results will be obtained. More difficulty is encountered in handling successfully, and initially, the nasal cartilages than any other parts. Secondary procedures to improve the nasal airway are frequently necessary.

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Child Rearing Principles

A boy needs parents, not push-overs, according to Cal Farley, founder of Boys Ranch at Amarillo, Texas. The principles of rearing a boy are "deceptively simple. Maybe that's why they are so easily forgotten—or not properly learned," Farley said in the January Today's Health, published by the American Medical Association.

Boys Ranch accommodates 220 youngsters and is expanding its facilities for another 500. In 20 years, 1500 boys—most from homes broken by family trouble or death—have lived at the ranch. About 40 per cent of the boys were in some kind of trouble with the law and the others were headed that way. Only 37 boys were failures. The ranch has no special disciplinary staff member. Every adult has authority over a boy while with him.

"This way, the boy learns to respect and obey all adults. Equally important, when a boy steps out of line we correct him immediately. Just keep boys on the beam, supervise and teach them until they finally understand and they'll turn out okay."

Farley listed the five guiding rules for rearing boys at Boys Ranch. They are:

—Teaching the boy to obey. This is the most difficult job and the most important. When a child is allowed to set his own rules he will grow up without any rules at all.

—Living with the boy. By helping him to enjoy his youth, he can be shown how his boyhood years can be used to equip himself for manhood.

—Being specific with the boy. Adults should let him know where they stand—and therefore where he stands. Then he is not confused by doubt, uncertainty, or conflict.

—Giving him responsibility. By making a boy feel part of the working team at the ranch (or at home), he will understand how to be part of the team in whatever sphere of life he enters.

—Loving him. The boy must be shown that love can't be measured by what one gets or gives but in how one conducts himself. It is a kind of mutual respect.

Cancerous and Precancerous Lesions of the Conjunctiva and Cornea

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PRECANCEROUS and cancerous lesions of the conjunctiva are uncommon but should always be considered in treating diseases of these tissues. Clinically, a broad classification can be made into pigmented and non-pigmented groups.

The non-pigmented group is the commonest and the origin of these lesions is from the surface epithelium. The conjunctiva and corneal surface epithelium undergo changes related to the keratosis of the skin, namely epidermidalization and dyskeratosis. In epidermidalization the epithelium of the limbus becomes thickened and may exhibit rete pegs. If an excess of cells undergo surface keratinization, forming a thick horny layer of flattened keratic anuclear plaques, then hyperkeratosis is present. If nuclei are present then parakeratosis is present. These lesions are benign as long as the basal layer remains palisaded and retains the morphologic characteristics and keratin is only produced at the surface and not by the cells of the prickle layer.

In dyskeratosis, keratohyaline is produced in the prickle layer. Mitotic figures may be present and these changes may ultimately lead to malignant invasive characteristics.

The benign papilloma is the most frequently found of any of these lesions and usually occurs in people over forty. Papillomas around the caruncle do occasionally appear in children.

Conjunctival papillomas occur in the upper fornix, at the lid margins, near the puncta or caruncle; they may be single or multiple and occasionally bilateral. Clinically they are recognized by their corrugated or cauliflower like surface and tend to be pedunculated. Occasionally they may be pigmented in dark skinned individuals. At the lid margins they may break down causing the formation of crusts. Papillomas have a predilection for the sites where epithelium undergoes a transition and are then more common at the lid margin and limbus. Limbal papillomas have an entirely different gross appearance from those of the cul de sac. They are elevated tumors with a flat irregular surface which may extend over the cornea. Clinically it may be difficult to differentiate this from an early squamous cell epithelioma. Some classify them as papillary squamous epitheliomas.

Pathologically papillomas have a central core of fibrous tissue which is vascular and is covered by stratified squamous epithelium. When the tumor extends over the cornea, Bowman's membrane may be destroyed. These papillomas rarely become malignant, but under constant irritations they may break down into an epithelioma. They must be differentiated from

1. chronic granulation tissue;
2. polypoid fibromas which are smooth;
3. epithelioma which are usually smoother;
4. limbal dermoids which commonly have hair sticking from them;
5. senile hyperkeratosis;
6. early pterygia.

Treatment is by local excision or lately beta radiation has been employed with satisfactory results.

Case I. Mr. H. R., a white male, age fifty-five, had noticed a small growth on his eye for two years which had gradually enlarged. No other symptoms were elicited. On examination he had a flat cauliflower like growth at the limbus in the temporal triangle of the left eye. This was fixed at the limbus. It was excised locally and a diagnosis of limbal papilloma was made, pathologically. In one area, shown by a white exudate in the picture, early carcinomatous changes were seen. (Fig. I)

LEUKOPLAKIA

Leukoplakia as elsewhere in the body is a true precancerous lesion. Although seen frequently in the mucous membrane of the mouth, it is seen much less commonly on the conjunctiva and cornea. The lesion is a focal area of epithelial hyperplasia and keratinization and is usually seen at the limbus temporally, but may also appear on the bulbar conjunctiva. It may vary in size, but is usually seen as a slightly elevated white plaque which may be

From the Department of Ophthalmology, Gill Memorial Eye, Ear, Nose and Throat Hospital.
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Fig. I

easily overlooked or mistaken for pinguecula. Leukoplakia is white and superficial whereas a pinguecula is yellow and subepithelial. Pathologically the tumor consists of a mass of thickened and keratinized epithelium without connective tissue core. This lesion is a forerunner of squamous cell epithelioma. Any change in size or vascularity may indicate malignant change.

Treatment of choice is complete excision, which is usually accomplished with very little difficulty. Differential diagnosis:

1. pterygiums and pingueculae
2. malignant epitheliomas
3. Bowen's disease

Case II. This seventy-three year old white male had noticed a "growth" on his left eye for approximately one year. This growth had been spreading fairly rapidly. When first seen the patient had a white raised lesion at the limbus at approximately three o'clock; the lesion measured 4 mm. by 5 mm. A diagnosis of epithelioma was made clinically.

Local excision was carried out, the tumor was excised with a good layer of corneal stroma. The postoperative course was uneventful and no recurrence has been noted to date. Pathological examination revealed the lesion to be leukoplakia. (Fig. II)



Fig. II

BOWEN'S DISEASE

Bowen's disease is infrequently seen and represents one of the earliest cancerous changes in ocular tissues. The exact classification of this condition is still in dispute. Some believe it to be a form of basal or squamous cell carcinoma in situ, others regard it as a precancerous lesion with malignant possibilities such as is seen in precancerous melanosis and therefore it falls into the category of Paget's disease of the breast.

McGavic reported this disease as a syndrome involving both cornea and conjuctiva at the limbus.

Bowen's disease is an intra-epithelial epithelioma involving either the cornea, conjunctiva, or skin of the lids. In ophthalmology, it is encountered most frequently on the cornea and has the appearance of a diffuse, slightly elevated granulomatous to gelatinous-looking lesion. Some degree of vascularization is always present. This disease arises in the epithelium and remains confined without breaking through the basal layer of epithelium for many years. It may eventually break through the surface epithelium and, rarely, may even metastasize. The lesion is commonly associated with some type of chronic inflammation which may keep the neoplasm masked for some time. There is usually some degree of inflammation surrounding the growth. In McGavic's original series, three of his five cases had a preceding history of injury or inflammation. This condition is almost always limited to those in the age group of fifty years or older. (Fig. III)



Fig. III

Case III. Mrs. R. R., a Negress, aged sixty-four years of age, had noticed a growth on her eye for the last two years. This had begun at the inferior margin of her cornea and had spread slowly over the surface of the cornea until it interfered with her vision. At this time, she sought medical treatment and was placed on some type of ophthalmic oint-

ment. This did not improve the condition and she was referred to this hospital for further treatment.

A history was obtained of having burning and itching eyes for many years. The patient had undergone surgery for the removal of a "tumor on her stomach," but further information concerning this was unobtainable. She also gave a familial history of a brother having had a condition similar to hers for which his eye was removed but we were unable to trace this further.

When first seen on August 16, 1955, a large gelatinous growth was present on the left eye. It involved the bulbar conjunctiva and approximately one-fourth of the lower temporal part of the cornea. A marked inflammatory reaction surrounded the lesion. The remaining cornea was thickened and edematous. Profuse lacrimation was present.

The vision in this eye was limited to light perception only, vision in the right eye uncorrected was 20/60. Both pupils reacted to light and accommodation. Tension in both eyes was 22 mm. of mercury by Schiotz's tonometer.

The right eye exhibited thickening of the bulbar conjunctiva due to chronic inflammation but was otherwise unremarkable. The slit lamp examination of the left eye revealed the thick gelatinous nature of the growth, as well as its marked vascularity. A tyndall effect was seen in the anterior chamber.

Cultures and smears were taken but showed only a few staphylococcus aureus. X-ray studies of the orbit were normal.

The remainder of the physical examination was negative. It was felt at this time that this lesion represented a neoplasm of the cornea and for this reason a wide enucleation was recommended.

The patient was hospitalized and a wide enucleation was performed, removing all of the bulbar conjunctiva and some of the palpebral conjunctiva. The postoperative course was unremarkable and to date no recurrence has been noted.

The pathologic report of the tissue submitted was that of intra-epithelial epithelioma or Bowen's disease.

These lesions are made up of epithelial cells showing great variation in size, shape, and staining characteristics. Mitoses are numerous and there may be many giant cells. The basement membrane by definition is not invaded but an inflammatory layer of plasma cells and leukocytes may be present beneath this layer.

Complete surgical excision is the procedure of choice. X-ray and Beta radiation produces variable results.

EPITHELIOMA

Squamous cell epithelioma of the conjunctiva is much (at least ten times) more common than basal cell epithelioma. Epitheliomas or epidermoid carcinomas are most frequently seen at the limbus but they do occur at the caruncle and in the bulbar and palpebral conjunctiva. A limbal epithelioma may invade the sclera and much more rarely the cornea. The tumor may even extend through the sclera and show intraocular invasion. Chronic irritation is a precipitating factor, consequently squamous epitheliomas and leukoplakias are usually located in the palpebral aperture and most often on the temporal side in the limbal region. Limbal epitheliomas begin as small greyish white opaque nodules that can easily be confused with senile hyperkeratosis. The growth is usually slow and may change little for years. The tumors are pinkish gray in color with a scattering of small reddish yellow spots over the surface. Dilated vessels course toward and away from the lesion. Under slit lamp magnification the general contour is smoothly lobular with small vessels forming a characteristic bud at the apex of each lobule. Areas of erosion may be present. The lesion does not invade the stroma of the cornea until very late.

Epithelioma must be differentiated from

1. benign papillomas
2. Bowen's disease
3. leukoplakia

The pathological picture shows typical epithelial cell nests which are surrounded by prickle and polygonal cells and these in turn by cuboidal and cylindrical cells. The nuclei are varied in size and form. Considerable inflammatory cells are usually present. Ash and Wilder reported forty eight tumors of the limbus. Of these thirty some were of the squamous cell epidermoid type of carcinomas, eight were papillary carcinomas and one was a basal cell type.

These lesions are of relatively low grade malignancy and can be treated conservatively. If the lesion is well localized surgical excision may be used. Larger lesions require more radical surgical excision.

Case IV. This ninety year old white male had noticed a growth on his left eye for approximately six months. The lesion probably dated further back than this. On examination vision in the right eye was 20/200 and in the left eye was 20/200. Pupils

were regular and reacted to light. Tension was normal in both eyes. A large white to pink tumor was present on the left eye. This was polypoid, smooth, and involved two-fifths of the cornea and appeared to originate at the limbus at approximately six to nine o'clock. Senile cataract was present in both eyes.

A diagnosis of epithelioma of the cornea was made. Local excision was carried out and a good layer of corneal stroma was excised along with the tumor. No recurrence has been noted to date.

Pathological sections showed the lesion to be covered by squamous epithelium. The entire mass showed a number of epithelial cords transversing through a myomatous stroma. The cords anastomosed to some degree. The cells in these cords did not stain as well as true epithelium and their nuclei varied somewhat. Occasional mitotic figures were seen. The tumor showed invasive tendencies. The final diagnosis was squamous cell carcinoma Grade I. (Fig. IV)



Fig. IV

The next main group of lesions are usually pigmented. Although pigment is present in all these lesions the pigment content is not characteristic of the type of cell and does not indicate the degree of malignancy. These pigment containing tumor cells are found in the same area.

The exact origin of the cells responsible for the pigmented group of lesions is still in dispute. Some believe them to be of neuroectodermal origin, cells which have migrated from the neural crest embryologically. These are often thought to be direct derivations of the Schwann cells. The old theory of mesodermal origin has been almost discarded. Whatever their origin these pigmented lesions which include the nevus, melanoma, and melanosis may be classified into distinct groups. These include the common nevus which consists of nests and strands of cells with irregular nuclei. Pigment is variable. No involvement of the dermis is seen. The next group and the potentially malignant group are the lesions with activity in the basal layers of the epidermis and involvement of the dermis in the so called junctional nevus. The third type is the dermal which has isolated clumps of nevus cells in the dermis but is separated from the epithelium by connective tissue. The junctional changes may lead to malignant melanoma and malignant melanosis. The dermal lesion includes the blue nevus and melanosis oculi. Most conjunctival nevi are junctional in nature.

1. Junctional
   a. malignant melanosis
   b. premalignant melanosis
   c. malignant melanoma
2. Mixed
3. Dermal melanosis
   a. blue nevus malignant
   b. dermal nevus

NEVUS

Nevi very rarely become malignant. They may be single or multiple. They are usually located in the scleral triangles at or near the limbus or the caruncle.

The tumor is usually elevated with a roughened surface and may have varying degrees of pigmentation. Reese, in reviewing the literature, found only two cases of malignancy developing from pre-existing conjunctival nevi. Hairs in the nevus is felt to be evidence of the benign nature of the tumor.

Nevi must be differentiated from

1. malignant melanosis—diffuse, granular, more yellowish
2. malignant melanoma
3. pinguecula

These lesions consist essentially of groups of large flat polygonal nevus cells which may or may not contain pigment.

Excision is the treatment of choice.

Case V. This forty year old female Negro had noticed a black spot in the inner corner of her left eye for many years. She thought that it had been getting larger. Vision in the right eye was 20/20 and in the left eye was 20/20. Tension was normal in both eyes. A slightly raised deeply pigmented lesion measuring 2 mm. by 2 mm. was present at the inner caruncle of the left eye. No inflammatory reaction was present around it and no increase in vascularity was noted. A diagnosis of benign nevus was made. Local excision was carried out.

Pathological section showed the lesion to consist of groups of large flat pigment polygonal nevus cells. Final diagnosis is benign pigmented nevus. (Fig. V)



Fig. V

PRECANCEROUS AND CANCEROUS MELANOSIS

Melanosis of the conjuctivae appears usually in the fifth and sixth decade. Precancerous melanosis manifests itself as a diffuse nonelevated pigmentation with a granular appearance. The lesion is diffuse and the pigment is rather more yellowish than brown. Malignant areas may appear at any site and multiple sites may become malignant simultaneously. The average length of time between its appearance and its subsequent malignant change is from five to ten years. Increase in pigmentation and signs of inflammation may indicate malignant change. Occasionally the lesion may regress spontaneously.

Differential diagnosis:

1. nevi—circumscribed, congenital tumors
2. melanosis—more circumscribed and vascular
3. melanosisoculi—increased pigmentation of all ocular tissue
4. ochronosis

In these lesions the basal cells of the conjunctival epithelium increase in number, become pigmented, swollen and hydropic. The basal layer proliferates and in others it is segregated into clumps. As cancerous changes take place, the cells begin to show invasive tendencies, mitotic figures are numerous and a marked inflammatory reaction occurs.

Sarcomas are really malignant melanosis.

Malignant melanomas are most commonly found in the fifth, sixth, and seventh decades although they may occur earlier. The tumors may involve any portion of the bulbar or palpebral conjunctivae. In the fornix they are oval or spherical and smooth. In the scleral triangle the tumor is flat with roughened surface and irregular edges. The pigment is usually brown or black.

Growth varies, it may be rapid or the mass may even be dormant for years. Sometimes the growth will outstrip its blood supply and necrosis results. Extension into the orbital tissues or to the globe along the perforating vessels or metastasis in the proximal glands, liver, or lung is the course. These extensions may be years in developing.

Melanin is not usually found in the urine, but when present is diagnostic of a melanoma. If still present after the removal of the tumor, metastasis should be looked for.

Differential diagnosis:

1. nevi
2. malignant cancerous melanosis

Callender grouped malignant melanomas as follows: (1) Spindle Cell A, spindle-shaped cells with narrow oval nucleus and indistinguishable or ill defined nucleolus. (2) Spindle Cell B, spindle-shaped cells, in which the nucleus is also oval, but which has a prominent nucleolus and is generally more robust than in Spindle Cell A. (3) Fascicular, a palisaded arrangement of the cells, which are usually spindle cell type B. (4) Necrotic, too necrotic to classify. (5) Mixed cell tumors, a combination of two or more types, with the exceptions of Spindle Cell A and B type tumors (which are classed as Spindle Cell B), and spindle-cell type B in palisaded arrangement (which are classed as Fascicular). (6) Epithelioid, a round or polygonal cell, usually rather large, but with considerable variation in size and shape. The nucleus is large, round and nucleolated. The cytoplasm is abundant and markedly acidophilic. The least malignant type is the Spindle cell A, and the most malignant is epithelioid. When cases are classified according to argyrophil fibers, as demonstrated by Wilder's reticulin stain, the malignancy is inversely proportional to the fiber content.

X-ray therapy is valueless and surgical excision more radical than otherwise is indicated as the primary procedure. A wide margin of the conjunctiva should be removed with the tumor. If the tumor turns out to be a Spindle Cell A or B with a high reticulum count it is justifiable to do no further surgery, but to watch the patient carefully. If the tumor proves to be a mixed cell type, an epithelial or a necrotic type, exenteration of the orbit should be done immediately.

MELANOSIS OCULI

Originally believed to be mesodermal in origin,

melanosis oculi is probably neuroectodermal in origin as well as the other pigmented lesions. If it becomes malignant the neoplastic cells are indistinguishable from other melanomas. It is manifested by pigmentation of the skin of the lids and the ocular tissues especially around the limbal vessels. It may involve the uveal tract and optic nerve. It is potentially malignant and must be watched very carefully.

Two broad groups of precancerous and cancerous lesions of the conjunctiva and cornea have been discussed. The first group of epithelial origin is relatively benign and can be treated conservatively. The second group is derived from neural ectoderm and melanocytes and is very malignant and must be treated with more radical methods.

Bibliography

Reese, A. B., M. D.: Tumors of the Eye, Paul B. Hoeber, Inc. Medical Book Department of Harper and Brothers, 1953, pp. 1-37, pp. 198-345.

Friedenwald, J. S. and associates: Ophthalmic Pathology, An Atlas and Textbook, Published under the joint sponsorship of The American Academy of Ophthalmology and Otolaryngology and The Armed Forces Institute of Pathology, W. B. Saunders Company, 1952, pp. 395-416.

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New Blood Test in Arthritis.

A relatively new blood test for rheumatoid arthritis has been shown to be about 85 per cent accurate by two new studies. The test involves adding particles of specially treated bentonite, an aluminum salt, to blood serum. If the patient has rheumatoid arthritis, the bentonite particles clump in a particular manner. It is similar to other blood tests for arthritis, which use sheep blood or latex as the clumping material. However, the bentonite test is simpler and speedier than the other tests, according to Drs. Kurt J. Bloch and Joseph J. Bunim of the National Institute of Arthritis and Metabolic Diseases, Bethesda, Md.

Their study, along with one by five Philadelphia researchers, appears in the January 24 Journal of the American Medical Association.

The two studies confirm earlier suggestions that the bentonite test might be useful in the specific diagnosis of rheumatoid arthritis, which has been termed the "nation's No. 1 crippler." A virulent form of arthritis, the disease is an inflammation of the joints. Because of its similarity to other forms of arthritis, rheumatoid arthritis is difficult to diagnose in the early stages when treatment is most effective.

The blood tests offer a means of early diagnosis. At present only a few laboratories perform them because of their complexity. However, the Philadelphia researchers believe the bentonite test is a step toward an accurate, simple, inexpensive, and dependable laboratory aid that could be used in many laboratories.

Drs. Bloch and Bunim studied 429 patients in whom rheumatoid arthritis or some other disease was definitely diagnosed by clinical examination. The blood test finding was positive in 97 (85 per cent) of 114 patients with rheumatoid arthritis. Only 3 per cent of the whole group reacted to the test when they did not have rheumatoid arthritis.

The Philadelphia researchers, who studied a total of 160 patients' serums, found the test to be accurate in 83 per cent of 48 patients with clinically confirmed rheumatoid arthritis. Their results were comparable to those in previously reported blood studies with more difficult and expensive procedures.

The Philadelphia research team was headed by Dr. Russell A. DelToro, of the department of medicine, section of rheumatology, Benjamin Franklin Clinic, and the Pennsylvania Hospital.

Newer Liver Function Studies

Serum Cholinesterase And Transaminase

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AN ATTEMPT to reduce the plethora of liver function tests has long been the goal of those interested in liver diseases. Wroblewski and Ladue and then others have commented on the use of the serum glutamic oxalacetic transaminase activity (SGO-T) as a diagnostic and prognostic test in liver disease.[1,2,3,4,5] It has been known for some time that the enzyme transaminase is present in large quantities in such body tissues as heart muscle, skeletal muscle, liver, brain, and kidney. In the presence of damage to any of these tissues, the serum level of this substance is raised. Following the devising of a method by Karman[6] to measure the activity of transaminase in the serum, many reports have appeared on the usefulness of this test.[7,8] It has proven particularly useful in diagnosing and in following the course of liver disease and myocardial infarction. Other writers have found values for transaminase to be elevated in the presence of certain neuromuscular diseases and following the use of opiates.[9,10,11]

Other enzymes have been tested in similar conditions, such as the serum glutamic pyruvic transaminase, which is said to be more specific in liver disease, especially hepatitis. It has been shown that this is true of hepatitis. The SGO-T, however, is equally and perhaps more specific in cirrhosis and other forms of liver injury[12] and from a practical standpoint has a wider range of usefulness for the general laboratory. The SGP-T probably has its greatest value as a confirmatory test, particularly in hepatitis.

The serum cholinesterase, sometimes called a pseudo-cholinesterase since it hydrolizes many esters besides acetylcholine, has been reported to be of value in liver disease in a number of papers including the excellent review of Vorhaus and Kark.[13] This substance which is apparently a mucoprotein of high molecular weight, is produced in the liver. Cholinesterase serum levels are thus depressed in liver injury. Determination of serum cholinesterase and transaminase appeared to offer an advantage over many of the older and more cumbersome procedures. The purpose of this article is to report our results with these tests.

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Presented at the Annual Meeting of The Medical Society of Virginia, Richmond, October 12-14, 1958.

PLANS OF STUDY

All patients admitted to the Gastrointestinal Sectional of McGuire Hospital with a suspected or proven liver disease were studied. The conventional liver function test profile including serum bilirubin, prothrombin activity, alkaline phosphatase, thymol turbidity, cholesterol and esters, and total protein with AG ratio were done on most patients. A BSP test was done in the absence of jaundice. The SGO-T determinations were done by the spectrophotometric method of Karman.[6] (Fig. 1) This measures

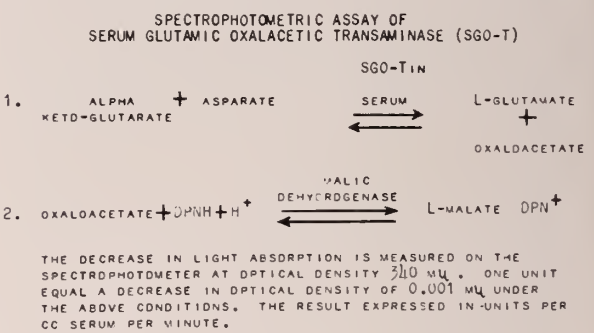


Fig. 1.

the decrease in optical density resulting from the oxidation of reduced diphosphopyridine nucleotide when serum is added to excesses of aspartic acid and alpha-keto-glutaric acid buffered at an optimal pH in the presence of reduced disphosphopyridine nucleotide and malic dehydrogenase. Cholinesterase determinations were performed by the pH method of Michel and the results expressed in delta pH units.[14] (Fig. 2) When serum containing cholinesterase and acetylcholine bromide are added to a buffer at pH 8 at 25°C. for one hour, acetic acid is formed which causes a drop in pH values from pH 8. The difference in pH, using tables provided by Michel (which allow for certain corrections) gives the results in

MICHEL'S METHOD FOR SERUM CHOLINESTERASE

SERUM CHOLINESTERASE plus ACETYLCHOLINE BROMIDE —Buffer *→ ACETIC ACID

METHOD MEASURES: Decrease in pH in one hour (delta pH/hr.) from pH 8

*Sodium diethylbarbiturate, K_2HPO_4, NaCl, $MgSO_4$, and dist. H_2O

Fig. 2.

delta pH units per hour (or decrease in pH per hour).

Controls consisting of 57 transaminase and 74 cholinesterase determinations were performed on normal hospital personnel and patients hospitalized for uncomplicated peptic ulcer and functional gastrointestinal complaints. Previous studies have shown values for both cholinesterase and transaminase to be normal in this type of patient with a normal range for transaminase from 5 to 40 units, and a normal range from .45 to 1.45 delta pH units for cholinesterase. The SGO-T determinations were generally done at 2-day intervals in acute cases and weekly in static ones. Cholinesterases were done at weekly intervals, as it has been shown that these values do not change rapidly. This may be because the life span of the cholinesterase molecule is approximately 28 days. Carrying out this study for a period of over one year gave us the opportunity to observe a number of patients for a period of several months. Many were seen on repeated admissions in varying stages of liver compensation.

VIRAL HEPATITIS

Fourteen patients with viral hepatitis were studied.

Seven were classified as infectious and seven as serum hepatitis, on the basis of their histories and incubation periods. There was one death in this group. This occurred in a previously debilitated man who died of a chronic serum hepatitis following a blood transfusion. (Fig. 3) As noted in the Table 1, the highest SGO-T values varied between 72 and 1150 units with a mean of 407. The lowest cholinesterase values varied between 0.03 and .99 units with a mean of .71. In general, the height of the SGO-T paralleled the acuteness of the illness and its fall toward normal correlated well with clinical improvement. Cholinesterase fell only moderately in this group of patients and frequently did not reach abnormally low levels. A fall to very low levels indicated a more severe case with slow recovery.

Vorhaus and Kark found the serum cholinesterase was depressed in acute liver diseases such as hepatitis, but more so in chronic forms.[13] Kaufman using another method also found low values in hepatitis, and felt the test was an especially valuable one in differentiating obstructive from hepatocellular jaundice.[15] Molander also found values were depressed in acute liver disease and rose to normal with convalescence.[5] LaMotta and his co-workers found a close parallel between the clinical course and the cholinesterase level.[16] As noted in our cases, there was also a close correlation between the percentage of cholesterol esters and the values for cholinesterase. In our study, the cholinesterase correlated well with the severity of the hepatitis. In most patients, it did not drop to abnormally low levels, but where it did, recovery was prolonged.

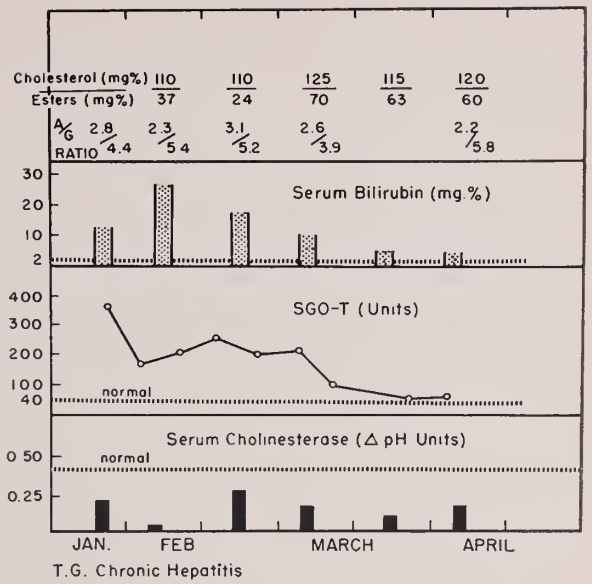


Fig. 3. T.G. with serum hepatitis and a long history of malnutrition ran abnormally low levels of cholinesterase and an elevated SGO-T throughout his hospital stay. Although his SGO-T dropped toward normal at the time of his death, the cholinesterase never rose.

The value of the SGO-T in acute hepatitis has been noted frequently. It is often elevated before any other liver function test. In one study, at an institution for mentally retarded children, the SGO-T showed elevation up to four weeks prior to the onset of clinical hepatitis.[2] It has been found to parallel more closely the clinical course of the illness than any of the other tests commonly used. We found it of great value in the differential diagnosis of jaundice. In decompensated cirrhosis and in obstruction, the figures for transaminase rarely rose above 150 units unless hepatitis was superimposed. In hepatitis, however, the figures were considerably higher in almost all instances. A fall in the SGO-T more closely correlated with the patient's clinical course

than did any of the other liver function tests. It generally fell to normal levels before the serum bilirubin and coincided with the return of appetite and well being.

LAENNEC'S CIRRHOSIS

There were 65 patients with cirrhosis. The majority of these were alcoholics to some degree. Many were admitted following an acute alcoholic debauch. Some were in coma and a number had had a massive gastrointestinal hemorrhage. Several patients were observed on repeated occasions and in and out of hepatic compensation. It was difficult to divide them into arbitrary compensated and decompensated groups since this may be an extremely fine distinction. In general, however, those patients with frank icterus (usually over 2 mg.% serum bilirubin), those with present or impending hepatic coma, and those with ascites were classified as decompensated. Those with ascites were included with reservations, however, since some of these maintained their ascitic state for months and years with little evidence of worsening of their condition. As has been noted by others, the patients with the most active disease ran the highest levels of SGO-T and those with the most severe disease ran the lowest levels of cholinesterase. Table 1 shows the highest SGO-T and lowest cholinesterase levels obtained in compensated cirrhosis, decompensated cirrhosis with ascites and decompensated cirrhosis without ascites. The high SGO-T values in the compensated group frequently were attributed to the alcoholic condition in which the patient entered the hospital. It has been shown in experimental animals and man that alcohol per se will cause elevation of the SGO-T.[17,18] We also noted this on occasion in our alcoholic patients without cirrhosis. Elevations were transient and rapidly fell toward normal. In this same group there was a wide range of cholinesterase values and in this group the BSP was often of more value in diagnosis than either of the other tests. The patients who were decompensated without ascites were frequently those who had a massive GI hemorrhage or those with jaundice. It was here that the cholinesterase was of particular value in differentiating jaundice due to hepatitis from that due to cirrhosis. In patients with ascites, the cholinesterase reached it lowest values and it was here that the close parallel between serum cholinesterase and serum and albumin was most often noted. This parallel has been noted previously and we found also a direct linear relationship between the two in our patients. The serum cholinesterase was a much more delicate and accurate test than the serum albumin, however, and frequently mirrored damage not reflected by the latter.

Improvement in the cirrhotic state was followed closely by a rise in cholinesterase toward normal levels. Failures to do this was usually associated with poor prognosis. Levels below 0.10 delta pH units were not often associated with recovery. The transaminase was not generally as useful in cirrhosis as serum cholinesterase. Its levels, which were not usually marked, rapidly fell toward normal and remained so even in the presence of severe and continuing decompensation.

Table 1

		Highest SGO-T (Units)			Lowest Cholinesterase (delta pH Units)		
Diagnosis	Number	High	Mean	Low	High	Mean	Low
Hepatitis	14	1150	407	70	.99	.71	.03
Cirrhosis:	65						
1. Compensated	30	108	40	9	1.15	.60	.23
2. Decompensated							
a. Ascites	19	238	69	6	1.00	.13	.00
b. No Ascites	16	295	92	38	.73	.37	.04

Normal Ranges: SGO-T 5-40 Cholinesterase 0.45-1.41

NEOPLASTIC DISEASE OF THE LIVER

There were 8 patients in this series with neoplastic invasion of the liver. One had a primary hepatoma superimposed on an old cirrhosis with ascites of many years duration. The other 7 had metastatic carcinoma from varied primary sites. Fifty-five SGO-T and cholinesterase determinations were done, the former ranging from 14 to 262 with a mean of 42, and the latter from .12 to .84 with a mean of .39. Neither test proved as consistently valuable as the alkaline phosphatase. Thirty-one phosphatases

were done in this group of patients with figures varying between 2.8 and 47 Bodansky units with a mean of 19.1, a much more diagnostic figure. Low figures for cholinesterase and high figures for SGO-T have been mentioned by others as occurring frequently in metastatic tumors of the liver.[19] In our series they did not follow any consistent pattern. While these tests were sometimes useful in determining the presence of liver tumor, they were not nearly so suggestive of neoplasm in our patients as the alkaline phosphatase.

MISCELLANEOUS DISEASES

Arsenic Poisoning: Arsenic is a well known hepatotoxin, especially in the forms in which it usually appears in commercial sprays and rat poisons. Two patients were seen with arsenic poisoning. Both of these had mild to moderate rises in their SGO-T levels, one to 108 and the other to 102 units. Both fell to normal levels within 7 to 10 days. A cholinesterase obtained in one patient was normal. This was done early, however, probably before the cholinesterase had had a chance to fall, and was not repeated. BSP was the only other liver function abnormality seen. The usual pancytopenia, neuritis, and other evidences of poisoning were present. Both patients recovered.

Brucellosis: One patient with fever, hepatosplenomegaly, and culture-proven brucellosis was studied. The cholinesterase fell and the transaminase rose, both to abnormal levels. All values returned to normal with clinical improvement on antibiotic therapy.

Amyloidosis: A case of primary amyloidosis of the liver was studied with cholinesterase and transaminase both normal. The only abnormal liver function test was the BSP retention of 25%. This was in keeping with the findings of others who have noted that the liver function tests other than BSP are usually unremarkable in primary amyloidosis involving the liver.[20]

Hemochromatosis: In one case of primary hemochromatosis, the cholinesterase remained between .21 and .26 for two months, rising to .68 following clinical improvement after phlebotomies. The SGO-T varied throughout the hospital stay between 23 and 43 units. Other liver function tests indicated chronic liver damage. All tests improved following treatment but none so strikingly as the cholinesterase.

Dubin-Johnson Syndrome: As could be expected in this relatively benign condition, values were entirely normal. The only abnormality in this patient was the direct bilirubin of 3.5 mg.%.

SUMMARY

1. The combined use of serum cholinesterase and serum glutamic oxalacetic transaminase in hepatitis, cirrhosis, metastatic neoplasm and other miscellaneous liver conditions was studied for a period of more than one year in approximately 100 patients.

2. The transaminase reflected most accurately acute liver damage and especially the presence of necrosis. Cholinesterase reflected best the degree of liver function impairment. Both tended to show prognosis in their failure to change from abnormal values and in the rapidity of their return toward normal values.

3. In viral hepatitis the SGO-T was particularly valuable, being the first test to become abnormal and it more accurately reflected clinical improvement than other tests. Cholinesterase was usually not greatly diminished unless the case was severe.

4. In cirrhosis the SGO-T was usually only mildly to moderately elevated. Here, the cholinesterase was frequently the most sensitive guide to prognosis. Its failure to rise indicated a downhill course.

5. In neoplastic diseases of the liver the transaminase was frequently elevated and the cholinesterase depressed. Neither of these was as reliable as alkaline phosphatase which was almost universally elevated to abnormal levels.

6. In a group of miscellaneous, toxic, infectious and metabolic diseases the SGO-T measured the acuteness of damage to the cells, and the cholinesterase the amount of damage and prognosis.

7. This combination of tests is a valuable one in the diagnosis and prognosis of liver disease.

References

1. Molander, D. W., Friedman, M. M., and LaDue, J. S.: Serum Cholinesterase in Hepatic and Neoplastic Diseases: A Preliminary Report. Ann. Int. Med. 41: 1139, 1954.
2. Wroblewski, F. and LaDue, J. S.: Serum Glutamic Oxalacetic Aminopherase (Transaminase) in Hepatitis. J.A.M.A. 160: 1130, 1956.
3. Wroblewski, F. and LaDue, J. S.: Serum Glutamic Oxalacetic Transaminase Activity as an Index of Liver Cell Injury: A Preliminary Report. Ann. Int. Med. 43: 345, 1955.
4. Wroblewski, F., Jervis, G., and LaDue, J. S.: The Diagnostic, Prognostic, and Epidemiologic Significance of Serum Glutamic Oxalacetic Transaminase (SGO-T) Alterations in Acute Hepatitis. Ann. Int. Med. 45: 800, 1956.
5. Molander, D. M., Sheppard, E., and Payne, M. A.: Serum Transaminase in Liver Disease. J.A.M.A. 163: 1461, 1957.

6. Karmen, A., Wroblewski, F., and LaDue, J. S.: Transaminase Activity in Human Blood. J. Clin. Investigation 34: 126, 1955.

7. Merrill, J. A., Lemley-Stone, J., Grace, J. T., and Meneely, G. R.: Recent Clinical Experiences with Serum Aminopherase (Transaminase) Determinations. J.A.M.A. 160: 1454, 1956.

8. Conrad, F. G.: Transaminase. New England J. Med. 256: 602, 1957.

9. Myerson, R. M., Hurwitz, J. K., and Sall, T.: Serum and cerebrospinal-fluid Transaminase Concentration in Various Neurologic Disorders. New England J. Med. 257: 272, 1957.

10. Siekert, R. G. and Fleisher, G. A.: Serum Glutamic Oxalacetic Transaminase in Certain Neurologic and Neuromuscular Diseases. Proc. Staff Meet. Mayo Clinic 31: 459, 1956.

11. Foulk, W. T., and Fleisher, G. A.: The Effect of Opiates on the Activity of Serum Transaminase. Proc. Staff Meet. Mayo Clin. 32: 395, 1957.

12. Chinsky, M. and Wolff, R. J., and Sherry, S.: Serum Transaminase Activity: A Comparison of the Pyruvic and Oxalacetic Transaminases. Am. J. Med. Sc. 233: 400, 1957.

13. Vorhaus, L. J. and Kark, R. M.: Serum Cholinesterase in Health and Disease, Am. J. Med. 14: 707, 1953.

14. Michel, H. O.: An Electrometric Method for the Determination of Red Blood Cell and Plasma Cholinesterase Activity, J. Lab. & Clin. Med. 34: 1564, 1949.

15. Kaufman, K.: Serum Cholinesterase Activity in Normal People and in People with Liver Disease. Ann. Int. Med. 41: 533, 1954.

16. LaMotta, R. V., Williams, H. M., and Wetstone, H. J.: Studies of Cholinesterase Activity: II. Serum Cholinesterase in Hepatitis and Cirrhosis, Gastroenterology 33: 50, 1957.

17. Henley, K. S., Wiggins, H. S., and Pollard, H. M.: The Effect of Oral Ethanol on the Glutamic Pyruvic and Glutamic Oxalacetic Transaminase in the Rat. Clin. Res. Proc. 4: 248, 1956.

18. Bang, N., Iversen, K., Jagt, T., Madsen, S.: Glutamic Oxalacetic Transaminase Activity in Acute and Chronic Alcoholism. Clin. Research 6: 297, 1958.

19. Molander, D. W., Wroblewski, F., and LaDue, J. S.: Transaminase Compared with Cholinesterase and Alkaline Phosphatase as an Index of Hepatocellular Integrity in the White Rat. Clin. Res. Proc. 3:20, 1955.

20. C.P.C., Barnes Hospital (Case No. 12016), Amyloidosis of the Liver and Cardiac Failure. Am. J. Med., 17: 280, 1954.

McGuire Veterans Administration Hospital
Richmond, Virginia

Library Exhibit On Medical Writing

An exhibit on the writing of medical articles is displayed in the University of Virginia Medical Library from February 3d through March 31st.

This "how-to-do-it" exhibit collects books on the various phases of writing articles in this specialized field. One part is devoted to guides for writing medical articles. Articles which are acceptable to editors as well as articles which are valuable to the profession are stressed. Here examples of articles before and after revision are given. Books on statistics and the application of statistics to the biological sciences are shown together with an article on the use of computers.

Another part of the exhibit deals with the inclusion of charts, tables, and illustrations in medical articles. The part which the Medical Library and the Medical Librarian contribute to medical writing is also included.

A table of books on the subject is placed nearby for borrowing and browsing. It includes hints on the securing of reprints, on bibliography making, on indexing books, and on the proof-reading of articles, to mention a few diverse aspects. Suggestions for writing special forms such as abstracts, case reports, book reviews, and papers for oral presentation are also included.

The Physician's Responsibility in Childhood Accident Prevention

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ONE OF MY FRIENDS who heard I was speaking asked me the topic of my address. When I replied "Childhood Accident Prevention", he paused a moment and then said, "I can't think of a more vitally important subject, or a more deadly dull one to discuss."

I think it's fair to ask ourselves whether anything new and vital can be said about a subject as old, as broad, as obvious, and as thoroughly discussed as childhood accident prevention. Most of us who deal with children are aware that accidents are the leading cause of death and crippling from the age of one through adolescence. We very definitely do not want our little patients hurt, burned, or poisoned. When these things occur through the carelessness or ignorance of parents, we are distressed and disturbed and often do not hesitate to tell the parents what they did that was wrong.

But what do we do to help them do right the next time, or to prevent the accident from occurring in the first place? Do we have a steady and continuing program of safety education as part of the routine of our individual practices and of our medical societies? Are we really doing all in our power to increase public safety consciousness, and to give verbal advice and literature about safety planning?

I think our attitude is usually a mixture of complacency and fatalism. We are complacent because we are in favor of safety. May I point out that being "for" safety is just as futile as being "against" sin—neither attitude has any value unless you work like the devil to support it. The road to the emergency room, like the road to another well known place of suffering, is paved with good intentions—the good intentions of parents who didn't really believe that Johnny would get the furniture polish out of the kitchen cabinet; of doctors who know that furniture polish should be kept locked away, but who never said so; and of manufacturers who never intended for Johnny to drink the polish and so did not print a warning label on the bottle.

Presented at the Annual Meeting of The Medical Society of Virginia, October 12-14, 1958, in Richmond.

Our good intentions do not justify an attitude of complacency. Do the facts justify an attitude of fatalism? Certainly many accidents are going to occur no matter what we do. Despite all our efforts, there will be plenty of evidence of carelessness and ignorance about basic safety principles. Should we, therefore, give up the whole project as useless?

Let me answer the question this way. About 11,000 children between the ages of one and fifteen are killed each year in accidents. Suppose that, despite an intensive campaign by doctors and medical societies, we could reduce that mortality by only 5%. Five per cent would certainly be a discouraging mortality reduction in any other field, but look what we would have done: prevented *550* childhood deaths each year, and saved over five thousand lives in just 10 years.

You are all well aware of the remarkable results that have been obtained over the past fifty years by industrial safety campaigns. There has been a steady decline in deaths from automobile accidents per million miles traveled, despite the terrible loss of 40,000 lives annually from this cause. Home and personal safety planning have lagged far behind industrial and highway safety. A very intensive, continuing campaign by many people and organizations will be required before we begin to bridge the gap.

After we have overcome our own attitudes of complacency and fatalism about childhood safety, what is it that we wish to teach to parents? First we want to work on their attitudes, to get them to accept the planning of a safe environment for their children as a vital responsibility. We don't want an attitude of neurotic overconcern, where the parents are constantly hovering over the child to keep him from hurting himself. Quite the contrary, we want the environment so safe that the parents can relax and be reasonably sure that he won't be hurt.

This involves the techniques of compartmentation and restraint, plus removal of hazards. "Compartmentation" as an entity in child care was first developed and described by Dr. E. Robbins Kimball of Evanston, Illinois. The term simply describes the

technique of placing the infant in a restricted—and safe—area for certain periods of the day, and of gradually changing and increasing the restricted area until the child has the knowledge and judgment to be unrestricted.

Compartmentation begins with the play-pen. The infant becomes accustomed to being placed in the pen at fairly regular hours each day, and he spends a large part of his waking hours there. It is important that this become completely routine long before he learns to crawl. The play-pen is useful for at least the first year, and often up to two years. The transition is made gradually, not to the living room floor, but to a gated room. The expansion gate properly used is one of the best tools available for keeping children safe and happy, and also for saving wear and tear on mothers. When the child is used to compartmentation, the mother should be able to put him in the room well stocked with toys, close the gate, and go take a nap. Dr. Kimball rightly describes this as "the acid test" of compartmentation.

As the child emerges from the gated room, it is important that all new areas open to him have been checked for safety hazards-exposed electrical fixtures, heavy objects that can be pulled down, cabinets containing dangerous fluids or medicines. Floor furnaces, ovens, and open heaters are potent sources of danger. Compartmentation should prevent children from coming near them until they are old enough to really understand the dangers involved. It's rather superfluous to advise a mother to keep the pot handles turned away from the front of the stove—if the child can reach the handle, he can touch the burner itself. When Junior is allowed out of the gated room, mother should make her last stand in the kitchen. A gate should go up across the kitchen door, or across the entire kitchen-dining room area. In addition to being a safety device, this is a fine technique for preventing the "six o'clock screaming meemies"—mother will gladly let the children romp over the rest of the house if they're not under foot while she's trying to get dinner.

There are other danger areas where compartmentation can be used—good latches on the cellar door and screen door, a gate across open stairways, and safe screens on upstairs windows. Outside the house, a fenced-in yard can make the difference between a relaxed, safe summer or a daily mad chase for mother and child.

When a new baby arrives, he should be protected from the toddler by a sturdy gate or a latch that only an adult can open. Later on, the older child should have a room he can retreat to where the toddler can't mess up his toys and books, not so much for safety as to keep peace in the family.

These are the basic technics of compartmentation. Variations will suggest themselves to suit the needs of individual families. I would like to emphasize that compartmentation intelligently planned and carried through is not a device to make the child unhappy and frustrated. Quite the contrary, it should increase his happiness and decrease his frustration by reducing friction within the home. It should free the mother from the necessity of watching the child constantly and constantly interfering in what he is trying to do. Compartmentation is not carried out for all the hours of the day, for there are times when the mother can watch the child in an unrestricted area and guide his actions. However, as Dr. Kimball points out, the small child should for at least half the waking hours of the day be relieved of the responsibility of not touching adult things.

Aside from compartmentation and removal of hazards, there are certain times when the child must be either physically restrained or constantly watched. Babies are real Houdinis about wriggling out of high chairs and falling on their heads. When mother goes to answer the phone while the toddler is playing in the tub, he has several choices—fall down in the tub, tumble out of it, turn on the hot water, or quietly drown.

Safety of the child in the automobile is a somewhat different subject, but an extremely important one. It has been shown statistically that in automobile accidents the person most subject to serious or fatal injury is the child in the front seat, especially if he is standing up. The average car seat that fits over the top of the front back-rest is almost as bad as no seat at all. I have had the personal experience of picking my own child, car-seat and all, off the floor after I made an emergency stop. If I'd hit the darned fool who pulled out in front of me, the child would have gone through the windshield. Now I see to it that our car-seat is firmly anchored, and any child who sits up front wears a seat belt. Sitting or standing behind the front seat is relatively safe, provided the back doors are provided with one of several safety devices to prevent their being opened by children.

As I have said, it is difficult to prove statistically that personal safety planning is effective. Let me give just one illustration where figures can be used in a more or less concrete manner. The Cornell

Crash Research Program has shown that mortality in automobile collisions can be reduced about 60% by the use of proper seat belts. Suppose that you begin using seat belts on your three-year old child or grandchild, and instill the seat belt habit into him so firmly that he continues to use them throughout his life. Assume that this cuts his chance of being killed in an auto accident by only 50% instead of the 60% or more quoted by the Cornell group. Statistical analysis shows that you will have increased his average life expectancy by more than two months. Not bad for a $10.95 investment in a seat belt!

As the child becomes older, education in recognizing and avoiding hazards obviously becomes more important than the protective measures already discussed. Physicians should alert parents to their responsibilities in providing this education. It might be added that a tendency toward "safeness" in a child is an expression of his total personality. Studies of accident repeaters have shown that the tense, disturbed child may be decidedly "accident prone." Everything we do to help a child develop normally in a relaxed and stable environment makes a contribution to his safety.

How can we as physicians, independently and in our societies, hope to be effective in safety education of parents and children? First of all we must *think* safety, and then we must *talk* safety. Those of us who do well child care must learn to include a discussion of safety practices as a routine part of our advice to parents. After all, we don't feed babies any more—the coalition of neighborhood mothers and baby food companies has grabbed the feeding ball and run off with it. This means that, if we don't need to unwind a baby from an overfeeding problem, we should have a little extra time to discuss safety. This discussion shouldn't be dragged in by the heels, so to speak, but should be worked naturally into the conversation. If we are alert, we will find plenty of cues.

I am reminded of the story—probably apocryphal—of the psychiatrist who was screening prospective draftees. As each man came into his office, the psychiatrist waved a white handkerchief at him and said "What does this make you think of". The first replied, "I think of bands playing and soldiers marching down Fifth Avenue on a wonderful spring day with people cheering and waving flags." The psychiatrist passed him without comment. The next man said, "I think of my poor old mother waving goodby as my train pulls out of the station." The psychiatrist jotted on his record, "Slighty depressed, but o.k.". To the third man he asked the question, "What does this handkerchief make you think of?" The man replied "Women". "Women? Why?" "That's all I think about."

The point is that if we're safety-minded, we'll think about safety and find occasions to bring it into the conversation. Mothers often bring the subject up themselves by some remark such as "I want you to check his head real good because he fell down the steps yesterday." Such a comment should start a reflex chain of events beginning with a discussion of stairway protection in general and progressing to other possible hazards of the child's current developmental stage. In ending the safety conversation, the physician should give the parent one or two pieces of appropriate safety literature with a brief comment about them. All this can be done while he is examining the child's head "real good" to reassure the mother.

Other conversational leads are frequent, if looked for. When a mother with a baby on the examining table turns her back to pick up a diaper, the safety lecture is automatic. Of course the mother always says "Oh he can't roll over yet," and we have to point out patiently that safety planning lies not in preventing what we expect to happen, but in preventing what we don't expect but which might easily happen anyway. . . . Often a parent will hold a lighted cigarette and a baby at the same time, giving the opportunity to discuss fire hazards. Whenever I enter an examining room and find a toddler busily trying to open my cabinets, I talk to the mother about dangerous materials in her cabinets at home. There are safety gates and latches in my office. I often have to close them to prevent some toddler from slipping away to go fishing in the men's room commode or racing through the psychiatrist's waiting room next door. Whenever I do, I try to discuss the advantages of using such safety equipment at home.

I mentioned safety literature, and there is plenty available. Just recently the Diaper Institute of America made available at minimal cost to doctors a series of six safety sheets, each covering the hazards of a particular age group. These can be obtained through the American Academy of Pediatrics. Several life insurance companies have free safety pamphlets. Among the outstanding ones are those of the Metropolitan Company, "A Letter to Parents", and "A Formula for Child Safety". This kind of material can be very helpful, especially if

the physician makes a few comments to focus attention on it as he gives it out.

A safety bulletin board is very appropriate for the doctor's office. In addition to material from various safety publications and pamphlets, I try to keep one or two newspaper clippings about recent childhood accidents fastened to a piece of cardboard which says in large letters, "Could this accident have been prevented?" This is a very good attention-getter. Almost everyone has enough morbid curiosity to read it.

Leaving the doctor's individual office, it is appropriate to ask what organized medicine as a whole should be doing about child safety. What is Virginia doing? There is an Accident Prevention Committee formed jointly by the Virginia Pediatric Society and the state chapter of the American Academy of Pediatrics. It has been at work in the past and has big plans for the future. Chairman of this committee, Dr. H. William Fink, was instrumental in planning an accident prevention campaign in Norfolk last year. The Junior Chamber of Commerce set up the program and representatives from the County Medical Society, local hospitals, city Health Department, Retail Druggist Association, Red Cross, PTA Council, and Public Safety Department worked on it. During this campaign our new Poison Control center was publicized, as well as general measures of child safety, by means of radio, TV, newspapers, and addresses before various clubs and organizations.

The Accident Prevention Committee emphasizes that the big safety campaign is only part of the answer to the accident problem. A continuing, year-round program by doctors, hospitals, and medical societies is needed. Every local society should have its own accident prevention committee to study local needs and coordinate local plans. Every hospital emergency room should be set up for fast and accurate handling of accident and poisoning cases. The telephone is the chief instrument for obtaining early attention for most poisoning cases. Suppose a frantic mother calls to say that she can't contact her doctor, and her two-year-old has just eaten half a tube of a well-known gelatinous substance containing oxyquinolone. The emergency room personnel should have at hand a book such as "Toxic Ingredients of Commercial Products"[1] and know how to find out whether or not the substance is dangerous. If they can't find the answer in the book, they should know how to contact one of the four Poison Control centers in the state to obtain the information. All those who handle the doctor's phone at the office and at home should be equally versed in what to do about a possible poisoning call. Time lost in deciding whether or not to bring a child in for treatment can be a crucial factor in the prognosis of a poisoning case.

The hospital emergency room is also an excellent place for spreading accident prevention propaganda. We've mentioned the complacency of parents about accidents. This complacency is never shaken so much as when a person's own child has just had a frightening accident. Just as soldiers traditionally are supposed to "get religion" during a battle, these parents have suddenly got religion about accident prevention. We want to see to it that they get the sermon then and there. Every emergency room should have its own safety bulletin board, and copies of several different safety pamphlets should be readily available.

I think we will have to conclude that there is much that can be done, and much that we are not doing in childhood accident prevention. In the great organizational work of our medical societies and hospitals, more time and thought must be given to our responsibilities in this field. In our private practices, we can do acceptable jobs of well child care by making examinations, answering questions, and giving routine immunizations. This should not be acceptable to us as physicians. No one is going to ask us "How can I make my child's environment safer?" But they have asked us implicitly "Help me raise my child to be strong and healthy." It's up to us to tell them the things they need to know, even though they don't know they need to know them.

Few will thank us for safety advice. Certainly no one will pay us extra, as they do for immunizations. They don't realize, but we should, that diphtheria, whooping cough, tetanus, smallpox, polio, and typhoid fever combined now cause only about 1/20 as many deaths in the children of this country as do accidents.

This then is the challenge, and the opportunity, that confronts us. There is no glory, no tangible reward in accident prevention work. There's no immediate satisfaction to compare to that which we feel when we help pull a child through a critical illness. You never see the child you save through accident prevention. If we seriously undertake the burden, we can only be promised a life-time of stressing the same points day after day, and still finding the next day's parents just as complacent about child safety.

But the results are there, intangible though they may be. It takes a higher order of imagination to receive a feeling of accomplishment in child safety

work. A higher order of responsibility is required to accept the challenge laid down by the 11,000 deaths and untold suffering of childhood accident victims each year. Medicine has faced many responsibilities in the past. Let us see to it that this challenge does not go unheeded.

Reference

1. Gleason and others: Toxic Ingredients of Commercial Products. Williams and Wilkins Company, Baltimore, 1957.

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Fall Prevention for Aged

Falling is one of the commonest but most unnecessary hazards faced by older persons. Hundreds of thousands of old persons are injured every year from falls, and more persons die after 65 from falls and their complications than from auto accident injuries, according to an article in the February Today's Health, published by the American Medical Association.

The article listed some of the major causes of falls and the ways in which they can be prevented. One of the major factors in falls is that as persons age their balance-recovery machinery fails. If a person starts to "teeter," certain muscles in his body instantly go into action to keep him on his feet. But in the older years, these muscles get lazy and don't function as rapidly.

Some of the most common causes of falls and their preventions are:

—Stairways. When an older person goes up or down stairs, he should not take one step with each foot, but should put both feet on a step before proceeding to the next one.

—Insufficient light. Older persons don't see as well as they once did. Stairways especially should be lighted. A night light in the bathroom is recommended. In addition, a person should keep a flashlight by his bed to use if he gets up in the night.

—Bedrooms. The most dangerous room in the house is not the kitchen, but the bedroom. This is where most elderly persons fall, often because they get up too quickly and become dizzy. When a person gets up, he should sit on the edge of the bed for a few minutes.

—Bifocal glasses. These are especially dangerous when a person goes downstairs, since he may look through the lower lens and the steps become blurred.

—Taking a step backwards. If a person feels uncertain about his footing, he should never step backwards unless he can see where he is going.

—Not lifting feet high enough. As a person ages, his muscles and ligaments are less lively and he doesn't lift his feet as high, with the result that he trips over all sorts of small things—rug corners, toys, thresholds and doormats.

—Ice. When the sidewalks are slick, a person should stay indoors. If he must walk on ice, he should use a flat-footed shuffle, keeping his weight forward.

—Bathrooms. A rubber suction mat in the tub is a must for tub or shower. In addition, grab-bars installed on the wall in the right place by the tub or shower can prevent falls.

—Climbing on chairs. Some older persons won't admit they're old and insist on climbing on chairs and tables. These are dangerous.

In addition, there are dozen of other things that contribute to falls, including escalators, poor housekeeping, high bus steps, shiny, slippery floors, and throw rugs that slide.

The article urged all persons to learn to walk properly and to arrange their environment so they won't fall. In conclusion, it listed three rules for helping people to stay on their feet in old age: start studying "senior-age safety" early; keep your weight down, and keep in good physical condition.

The article was written by Edward D. Fales, Jr., Lime Rock Station, Conn.

Fat Embolism

Case Report and Review of the Literature

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FAT EMBOLISM is a syndrome often associated with soft tissue trauma and fractures of long bones. The outstanding characteristic of this syndrome is the result of a twofold process: first, mechanical obstruction of the capillaries by fat globules results in right heart failure and acute cor pulmonale. Second, the delayed chemical action with hydrolysis of the neutral fats to produce fatty acids results in the destruction of the endothelium of the involved capillaries.

The first evidence of fat embolism was seen in 1862 by Zenker[31] who injected milk into the veins of a rabbit and produced death. In 1907 Rainier[18] advised the use of a tourniquet to prevent the transport of fat emboli. The mechanism of fat emboli, until recently has been a rather theoretical subject, and as late as 1948 an official British journal,[61,18] published a statement that fat embolism, as a true entity, does not exist and felt the diagnosis should be abandoned. In 1957 Harkins, Allen, Moyer, and Rhoads,[1] in their discussion of fat embolism stated, "The significance of fat embolism has not been established conclusively. Among the troops of the United Nations in Korea, Scully was often able to demonstrate at autopsy fat emboli in the small pulmonary vessels. No clinical significance was evident except in infrequent cases in which emboli passed through the pulmonary circuit to reach the brain or kidney and result in disturbances of the sensorium or hematuria. The therapy is entirely nonspecific."

Other reports show a gradual and progressive recognition of the condition as noted by Sutton[56] who, in World War I, showed a 10% incidence in wounds. Robb-Smith[50] in 1941, showed 789 accidents with 41 fat emboli and 29 as a major cause of death. Thus the incidence of fat embolism is being more actively discussed and is recognized now as a major problem in the complications of long bone fractures and in elective orthopedic surgery.

The concept of fat embolism until recently has been that the emboli consist of mechanically released particles of fat, usually marrow fat from the fractured bone. The fat is presumed to have been sucked into the veins and carried to the lungs as emboli. Several articles attempt to refute the correctness of this theory. Some of the outstanding reasons presented have been the presence of a high incidence of fat embolism seen in ordinary postmortem findings which are identical to those seen in fat embolism from fractures of long bones. Wright[62] in 1932, showed a 52% incidence in ordinary postmortem findings. Other examples have been seen in burns and cardiovascular deaths. There is the question of a disturbance in the lipid metabolism or a change in the emulsification of neutral fats with increased mobilization of fat, synthesis and/or decomposition of fat as noted by the increased serum lipids. This is seen after ether anesthesia or after the ingestion of alcohol.

Observations of the extent of trauma and the frequency of fat embolism by Johnson and Svanborg[10] showed that extensive injury to the bone marrow may produce practically no fat embolism where in other cases minor injury will result in severe fat embolic syndromes. Baylor & Baylor[63] in 1949, and Harrison and Street, in 1951, and Key and Lottes[65] have reported intra medullary nailing of fractures with no incidence of fatal embolism. Contradictory statements are seen by Kuntscher[30], "Fat embolism is the most common complication of medullary nailing." There have been reports of high incidence of fatal emboli in cases where no trauma was present such as burns, acute hematogenous osteomyelitis, and periostitis.[23,44,45] There has been some discussion concerning the passage of fat emboli through the capillaries of the lung into the smaller vessels of the brain and kidney[10]. This has not been proven conclusively.

With this preface in mind a detailed report on a recent case of fat embolism at this hospital with recovery is presented.

A 21 year old white male from Grayson County, Virginia, was admitted to the Marion General Hospital on June 21, 1957, sustaining multiple fresh

Presented at Southwestern Virginia Medical Society at Radford, Virginia, April 17, 1958.

fractures of the right thigh and right leg. These fractures involved the middle third of the femur, tibia, and fibula with over-riding, but no evidence of a compound wound. (Fig. 2-3) At the time of admission the patient was conscious, alert, and gave a history of being caught between his motorcycle and the fender of a car when struck at an intersection. He was pinned between the two, injuring only his right leg and right thigh. There was no evidence of head injury, no loss of sensorium, and no abrasions, contusions, or lacerations of the skull, trunk, or any other part of the body. His past history revealed

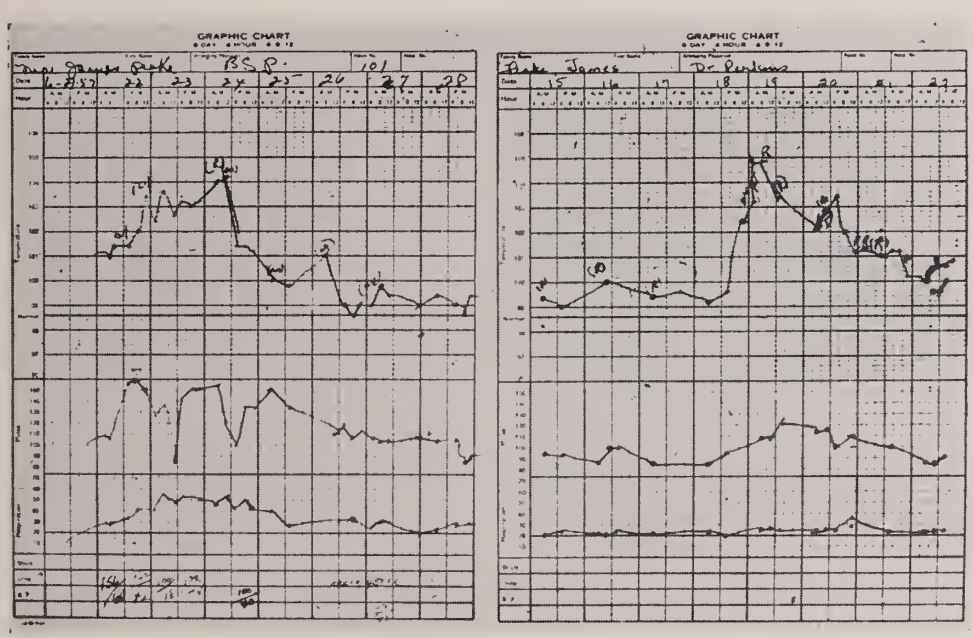


Figure 1

that as a child an attack of acute hematogenous osteomyelitis involving both femurs required drainage at that time. These areas were then well healed. The remainder of the physical findings were essentially negative. Temperature 98.6°, pulse 80, respirations 18, blood pressure 130/80. The patient was placed in skeletal traction with a pin through the upper third of the tibia and the leg placed in a Thomas splint with a Pearson attachment. An open reduction was planned for the following morning. However, about 7 a.m., the patient suddenly developed drowsiness and preoperative sedation was withheld. On examination the patient was semicomatose. He developed severe generalized convulsions and lapsed into a deep coma. A mild shock was present and a gradual decerebrate rigidity developed which lasted for about two weeks. An intracranial lesion was considered though there was no history of head injury. A catheter was inserted and only 50 cc. of bloody urine was obtained in the first 24 hours.

On the second day following injury, the patient developed acute pulmonary edema. This was treated with atropine, gr. 1/100 every two hours, rapid digitalization, nasal oxygen, hypertonic glucose solutions, and antibiotics. The urinary output after the first 24 hours gradually improved. The serum lipase done at this time was within normal limits. The advancing cerebral edema, repeated generalized convulsions, and hyperthermia, poor general condition, etc., definitely limited his prognosis. Intravenous fluids were limited to 1,000 cc. of 5% glucose in water with an additional 50 cc. of 50% hypertonic glucose solution daily in an attempt to reduce the cerebral edema. The pupils were markedly dilated bilaterally, the patient was in decerebrate rigidity with bilateral positive Babinski and absent abdominal reflexes. Fat was present in the urine in a dilution of 1-1800. The extreme hyperthermia which reached 104-105° was controlled by the use of ice packs (see graph). The patient was semicomatose for a period of eight weeks and then gradually improved. Tube feedings using a sustagen tube, catheter drainage, movement from side to side and careful nursing care greatly helped in his recovery. Early in the state there were petechial hemorrhages along the lateral chest wall especially on the left side and a drop in hemoglobin from 95 to 70%. This latter was corrected by 500 cc. of whole blood. The patient gradually improved and by August 1, 1957 he was able to move his arms and legs. A body cast was applied incorporating the tibial pin in a double hip spika. Neurosurgical consultation with Dr. William Tice

of Roanoke, on July 7, 1957 confirmed the above findings. "The patient showed a decerebrate state with very little extensor rigidity but at this time showed no voluntary movement of the extremities. The reflexes were active and essentially equal, with the reflexes more prompt on the right than on the left. There were bilateral positive Babinski reactions, and absent abdominal reflexes. There were no responses to painful stimulation. The pupils were large and equal. The eye grounds showed white areas of retinal degeneration which resembled exudates of secondary hemorrhage."

Some residual brain damage is noted at the present



Figure 2

time especially in memory loss. He can read, write and move his legs and arms, and at the present time the described fractures are well healed. He was discharged on August 8, 1957, and at present has minimal residuals of his lesion. We feel that he has made an amazing recovery.

Fat embolism after trauma has been confused with pulmonary edema, subdural hematoma, bronchopneumonia, and diabetic coma. It has been unrecognized frequently until too late to institute possible life saving therapy. Patients often die in acute right sided heart failure early in the first stages of fat embolism. The significant diagnostic signs are usually a marked drop in hemoglobin out of proportion to the blood loss about the fracture site.[64] This is usually seen 48-72 hours after the initial onset. Fat globules may be seen early in the blood stream with a dark field microscope and fluoroscreen; in the urine using the sizzle test of Scuderi[55] and in the sputum. The serum calcium usually drops, the serum lipase will rise in 2-6 hours after the incident and will return to normal within 24 hours. Petechial hemorrhages are noted about the chest and abdominal wall. Acute cor pulmonale occurs after the embolism is quite marked and is often accountable for the high mortality.

Bone marrow embolism which sometimes appears coexistent with fat embolism is an identical mechanism but is usually seen with rib and vertebral fractures rather than long bone fractures. Rappaport and Rone and Howe[32] described two hundred cases of trauma where bone marrow embolism was present in a 6% incidence. They state, "The intramedullary sinusoids of the blood spaces may be separated from the systemic circulation by a single endothelial cell and it is hard to understand why bone marrow embolism is not more common." Other types of embolism have been noted, i.e., pulmonary embolism from blood clot (thrombophlebitis), cotton fibers, metallic substances, particulate foreign body and air. In pulmonary embolism, a mechanical block of the main trunk of the pulmonary artery results in prompt death when 60% occlusion is present. A similar type of mechanical obstruction occurs in fat embolism during the first stage but involves rather massive embolism of capillaries with resultant acute and sudden severe dilatation of the right heart, drop in minute volume, increased pulmonary artery pressure, and fall in blood pressure, cardiac output and apnea.

Many experiments using the so-called "bland" substances have been used. Zenker[31] in 1862 injected milk into the jugular vein. Dunn[6] in 1920 used potato starch and saline, Harman and Ragaz[42] in 1950 used

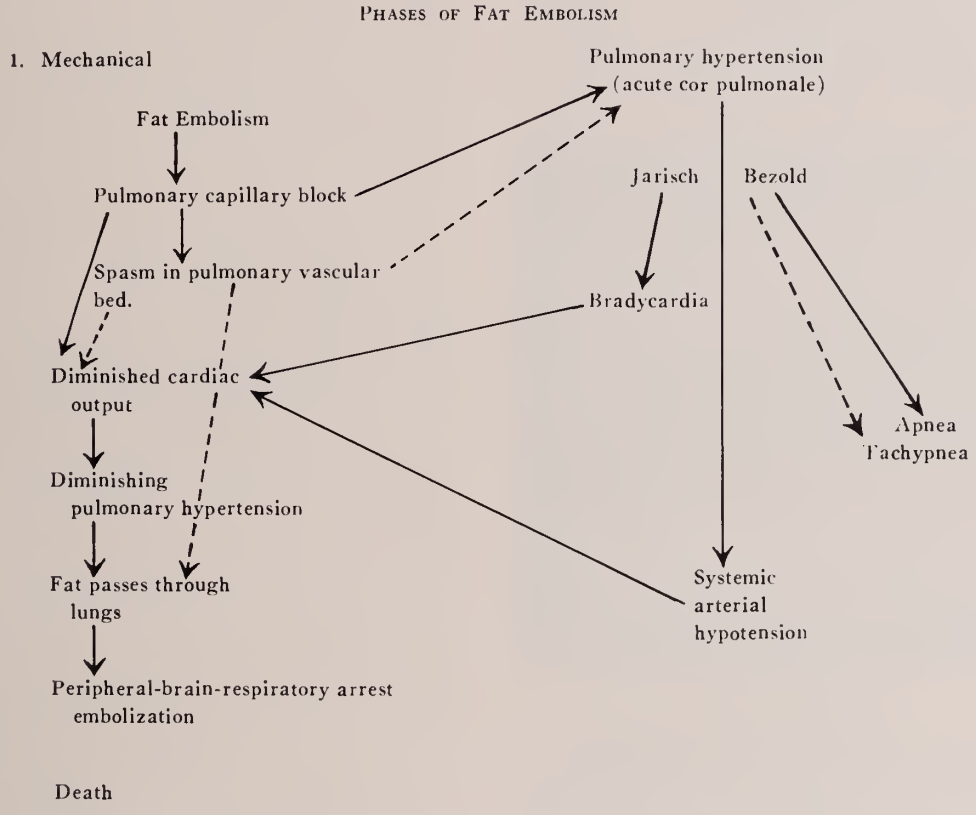


Figure 3

an alcoholic extract of homogenous fat and injected it into rabbits and their results showed similar effects, i.e., mechanical obstruction but in addition a severe chemical irritation. When paraffin was used no such pulmonary lesions could be noted. His findings at this time were "considering the irritative nature of the long chain fatty acids on the tissues of the lung

with the presence of lipase in the alveolar septum, it was felt that the lesions were the result of hydrolysis of the emboli as neutral fat and inflammation produced by release of the fatty acids".

Price, Hatta, and Smith[67] in 1935 studied the effects of multiple small emboli and the dynamics of the resulting pulmonary hypertension. They used barium sulfate to produce mechanical obstructions as a source of emboli. Farris,[66] in the Surgical Clinics of North America in 1954, introduced buckshot up to three hundred pieces into the internal jugular vein of a rabbit and amazingly enough produced very little physiological change. These passed into the right side of the heart and out into the pulmonary circuit, done under local anesthesia without untoward results.



Schema indicating possible consequences of fat embolism. Halasz, N. A. and Marasco, J. P.: An Experimental Study of Fat Embolism. Surgery 41: 1957.[6]

In order to discuss fat embolism a review of the chemistry of fats is in order. Fat can be extracted with ether and alcohol and in this extract fatty acids are found. Fatty materials are classified as: 1. Tryglycerides of fatty acids, that is true fats and oils. 2. Lipid compound of fatty acids with secondary alcohol cholesterol. 3. Free cholesterol and various pigments which are soluble in fat but are not related closely to the fats. These are unsaponifiable materials and classified under sterols. Oleic acid ($C_{18}H_{34}O_2$) linoleic and linolenic are the unsatured fatty acids. Stearic and palmitic acids are saturated and these are solidified at body temperature. Phospholipids are found in all tissues and sphingomyelin is found mostly in the brain and nerve tissue. The sterols, cholesterols, complex hydroaromatic alcohols are found in essentially all tissues and body fluids. They exist in a free state and with fatty acids as esters. The increase in cholesterol ester indicates that the sterols play a part in the transport of fatty acids. There is neither fat nor phospholipid in the urine normally. Absorbed fat can be seen in the blood as minute particles through a dark field microscope less than one micron in diameter called chylomicrons. Normally about three fourths of the fat in blood is in solution and is attached beta lipo protein. A physiological hyperlipemia is seen after ingestion of fats with a peak occurring about three hours after the ingestion of the meal. The turbidity seen in the blood in hyperlipemia is due primarily to an increase in the neutral fat. When the cholesterol or phospholipids are elevated, the serum is clear. "Boyd concluded that the phospholipids tend to maintain the other fat fractions in a supersaturated state in the serum. Lehman

and Moore[44] have already suggested that this phenomenon may be due to fat normally in the blood aggregating into larger particles as a result of certain physical and chemical changes in the blood."[23] However, there are no changes in the hematocrit, blood volume, etc., to substantiate this. Scuderi[35] was one of the early ones to show that hydrolyzed fat is much more toxic than neutral fat from which it is derived and produces an intense exudate in the lungs in experimental animals. He found that oleic acid was seven times as lethal as neutral bone fat. Gomori and others have demonstrated that lung tissue is high in the enzyme lipase.

Fat is removed from the circulation by four mechanisms, excretion going through the kidneys, excretion through the liver, reticuloendothelial system, and blood and tissue lipase. Swank[57] noted



Figure 4

physiological clustering of fat chylomicrons in the blood after a fatty meal. These larger fat particles are then presumedly strained out of the circulation by capillaries and reticuloendothelial cells. Why alcoholics are more prone to fat embolism than nonalcoholics has not been proven. However, this is also seen with ether and cyclopropane anesthesia. It has also been noted with some increased incidence in the use of intravenous ether. Du Toit[23] suggests that the fat emulsion is less stable in these individuals and postulates that this is due to frequent dilution with alcohol in the case of the alcoholic. It seems probable that fat solvents may in some way make the fat unstable.

In reviewing his work[18] we see that the amount of fat in long bones was considered to be insufficient to produce fat embolism after fractures. This was first noted by Scriba[54] in 1880 and then again by Lehman and Moore[45] in 1923. They felt the local site of fracture was not the true source and that there was a systemic site of pulmonary embolism. Their conclusion,[45] however, was based on studies using rabbits in determining the amount of fat in the diaphysis which they estimated to be about 70 grams of fat. Peltier,[20] however, studied human femurs and extracted the fat with 95% alcohol and ether. He found that the tubular diaphysis does not contain a major store of bone fat as assumed by Lehman and Moore, and that the spongy metaphysis contained the greater volume (60% in the metaphysis) with a total of 121 grams of bone fat in the adult. This fat from the human long bone and subcutaneous tissue is almost entirely neutral with 60-80% of the fatty constituents being unsaturated. The major portion of the unsaturated fatty acids consist of oleic acid which is seven times as lethal (Scuderi)[35] as neutral fat.

The toxic properties of neutral fat and free fatty acids are well evaulated by Peltier[18,22] (see graphs). The injection of neutral fat results in sudden dyspnea, venous engorgement, and white froth at the mouth and nose. At autopsy the right side of the heart is markedly dilated, there is thinning of the wall of the ventricle, the lungs are moist, somewhat heavier and anemic. The toxicity of the neutral fat thus is a function of the viscosity, resulting in acute cor pulmonale.

Fatty acids, on the other hand, result in toxicity which is a function of the degree of unsaturation of the fatty acids. This appears after a latent period, of 24-72 hours, and is due to the hydrolysis of neutral fats. The result is dyspnea coming on more slowly, profuse flow of serosanguineous fluid from the nose and mouth, no venous congestion, and at autopsy the heart is small and not dilated. The lungs are markedly engorged with a bloody exudate and there are multiple areas of hemorrhagic infiltration of the lungs. The hemoglobin drops out of all proportion to the amount of blood loss at the fracture site. Petechial hemorrhages are seen in the skin especially in the trunk. The findings in the brain as noted by Pearsall and Weaver[23] show "hyperemia of the meninges and cortical vessels. The gray matter shows little change whereas the white matter shows petechial hemorrhage. Areas of softening are noted in the brain stem especially where the capillaries contain fat emboli. The choroid plexus frequently shows widespread damage. There is perivascular myelin degeneration and usually little neurological reaction."

Peltier,[22] in the previous references, shows that the rabbit dying after the injection of 900 mg. of trilene, on autopsy, revealed a lung markedly anemic. Histological study of a section of this lung showed some disorganization of the alveolar pattern with some edema. The rabbit dying after 250 mg. of oleic acid being introduced intravenously revealed a grossly hemorrhagic lung. Histological sections of this lung revealed marked congestion, hemorrhagic exudate and disorganization of the alveolar pattern. This death due to trilene was on a viscosity basis with mechanical obstruction, whereas death resulting from the injection of oleic acid following a latent period of 24-72 hours after the injection was due to the hemorrhage into the lung secondary to the chemical action of the fatty acid. Other investigators have substantiated this viewpoint.[38,43,55]

II. Chemical Phase of Fat Embolism
Toxic properties of neutral fat and fatty acids

1. Neutral fat-toxicity is a function of the viscosity.

↓

1. Sudden dyspnea
2. Venous engorgement
3. White froth at mouth and nose

Acute right heart failure due to mechanical block.

4. Autopsy—Right side heart markedly dilated thinning of wall of ventricle
Lungs moist—somewhat heavier and anemic

2. Fatty acids—Toxicity is a function of the degree of unsaturation.

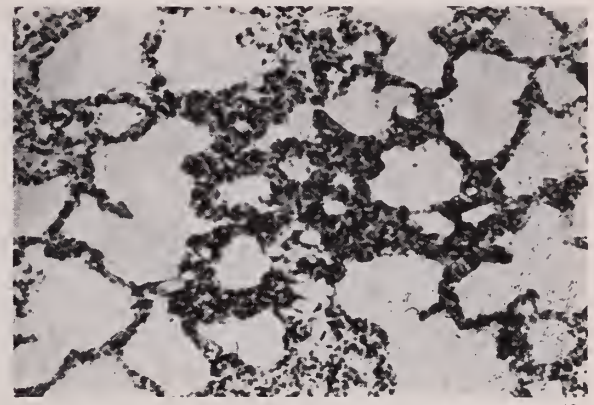
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1. Dyspnea more slowly

Latent period 24-72 hours due to hydrolysis of fats

2. Profuse flow serosanguineous fluid nose and mouth.
3. No venous congestion
4. At autopsy heart is small—not dilated
5. Lungs engorged with bloody exudate
6. Multiple areas of hemorrhagic infiltration in lungs

Experimental studies done by Nicholas Halaz and John Morasco[6] concerning the physiological changes in pulmonary artery pressures and femoral artery pressures proved interesting. These experiments using dogs and inserting catheters into the pulmonary artery, left auricle and into the femoral artery revealed rather dramatic changes after the injection of fatty substance. These consisted of a rapid rise in the pulmonary artery pressure during the injection and a fall in the femoral artery pressure and at the same time a period of apnea lasting for 3 to 15 seconds and up to 3 minutes. In addition there was a marked bradycardia, a drop in blood pressure, and cyanosis followed by a deep slow Cheyne-Stokes respiration. Sometimes there is a short period just before death of extreme tachypnea produced by the intercostal muscles without diaphragmatic action. This is known as a Churchill-Downing reflex[6] due to the distention of the pulmonary vessels. One should

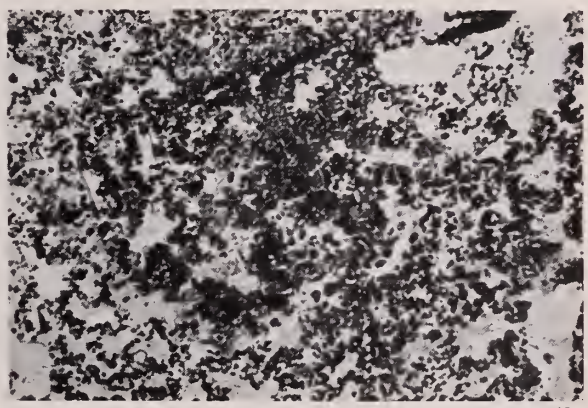


(From Peltier[18])

Figure 5

refer to their article concerning this graph (Fig. 7) for further details.

The one consistent finding noted was that fat was not found in the venous side of the pulmonary circuit, left side of the heart, until shortly before death. Another graph from this article[6] describes the mechanical phase of pulmonary embolism. Emboli block the pulmonary capillaries with spasm in the pulmonary vascular bed producing an acute cor pulmonale. The so-called Jarisch-Bezold reflex (bradycardia, apnea, systemic arterial hypotension) is due



(From Peltier[18])

Figure 6

to the distention of the pulmonary vessels. This was followed by a diminished pulmonary hypertension as the fat passes through the lungs with massive peripheral embolization resulting in death. Immediate cause of death in all cases appeared to be a respiratory arrest which preceded cardiac standstill

and was felt to be due to the cerebral anoxia secondary to the fat in the vessels of the brain. This is a theoretical graph which was set up by these authors[6] to describe the possible developments that take place during the pulmonary embolism in the first stage of the embolic phenomena.

Peltier[19] used a tourniquet in studying the effects of trauma in dogs. When the tourniquet was left in place for a period of 30 to 60 and even 90 minutes after long bone fractures, no fat emboli could be found in the blood until the release of the tourniquet. When no tourniquet was used, after 30 minutes five

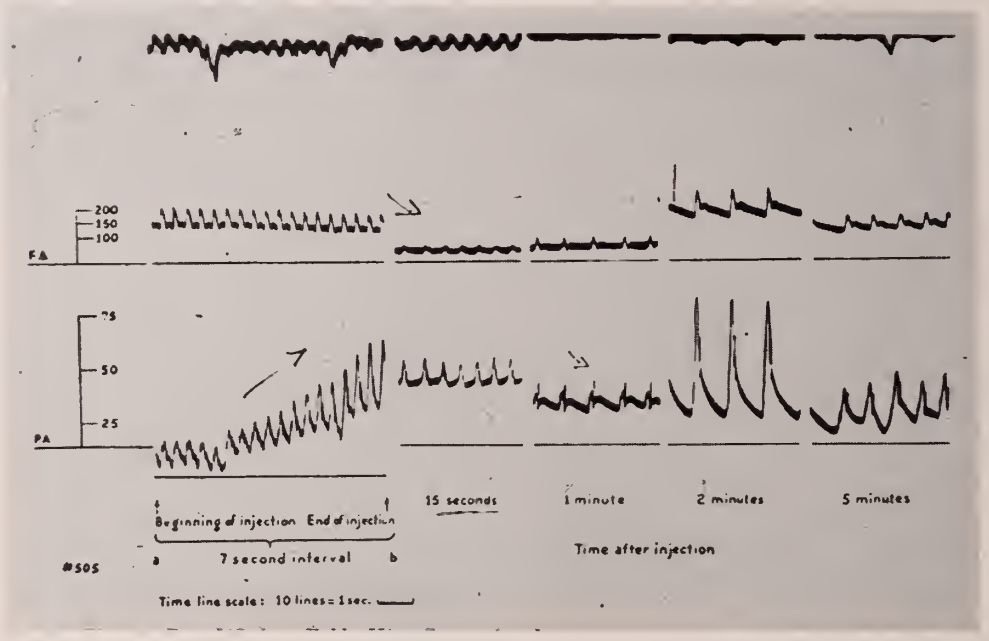


Figure 7 (From Halasz and Marasco[6])

out of seven dogs showed fat emboli present. After the release of the tourniquet, the morbidity remained lower than when no tourniquet was used. This emphasizes the importance of the use of the tourniquet and the prophylactic measures to prevent the transport of fat emboli. Local tissue pressure has been shown to be a major factor. When fractures are closed considerable higher frequency of fat embolism occurs than in open or compound fractures. Stress, ACTH, cortisone, have failed to show any effect on fat embolism[18]. A fatty meal has shown no particular effect although previously described to have a moderate effect. (Pearsall and Weaver[23]). This was refuted by Peltier.[18] The systemic stores of fat cannot be completely excluded although the weight of evidence is on a local rather than a systemic effect in fat embolism.

Other situations in which suspicion of the fat embolism syndrome should be considered are: 1. Inflammation of bone. Hedri[44] felt that acute hemolytic osteomyelitis and acute periostitis are very definite sources of fat embolism. 2. Soft tissue damage. 3. Changing altitudes and pressure, i.e., deep sea diving and high altitude flying. Hawkins and Ratkins demonstrated that the typical "bends" syndrome is not only a source of nitrogen bubbles but also of fat emboli. It is to be noted that bone marrow embolism and fat embolism coexist in a ratio of about 84% fat embolism to 26% bone marrow embolism.

In summarizing, it would appear from the review of the literature and a study of the case history presented that the basic cause of fat embolism has not been definitely established and needs further investigation. Warthin[60] in his classic review felt that the source of fat embolism was at the injured site and most authors still agree with this. The most logical explanation at the present time seems to be this is a twofold process making fat embolism a syndrome rather than a lesion. First, mechanical obstruction due to the viscosity of the neutral fat results in acute cor pulmonale. Second, 24 to 72 hours after the precipitating occurrence, hydrolysis of the neutral fat produces unsaturated fatty acids such as oleic acid and results in severe chemical irritation and destruction of the endothelium of distant capillaries.

In considering the treatment and avoidance of the fat embolism syndrome there are several important factors that are felt now to be of benefit. 1. The use

of a tourniquet in elective cases. 2. The gentle handling of fractures. 3. Prevention of shock and dehydration. 4. Rapid digitalization in cases of right heart failure and pulmonary edema. 5. Consideration of the fact that ether and cyclopropane anesthesia increase serum lipids which may predispose to the fat embolism syndrome. Acute alcoholism also seems likely to be a predisposing factor. 6. The use of heparin appears to be of doubtful value and is only mentioned to be condemned since dispersion of the fat globules results in expedition of emulsification of the fat and break down into component fatty acids with resultant disruption of capillaries and endothelium. 7. Beware of a fall in hemoglobin 24-48 hours after long bone fracture.[64]

In the field of physiological and biochemical research there is an approach very much needed by the clinician. This is the suppression of lipase secretion during the chemical stage of fat embolization in order to prevent the hydrolysis of fats to fatty acids and the immobilization of calcium ion which become involved with the fatty acids to form calcium soaps. This involves the problem of elevated serum lipase in the pulmonary circuit during fat embolism.

We feel that an alertness to an all too seldom recognized syndrome in association with continued efforts in the physiological and biochemical fields may further aid us, the clinicians, to avoid preventable mortality and disability.

Bibliography

1. Allen, Harkins, Moyer, Rhoads: Surgery—Principles and Practices. J. B. Lippincott Company, Philadelphia, 1957.
2. Brown, D. W.: Treatment of Cerebral Fat Embolism. Dis. Nerv. System 15: 307-309, 1954.
3. Davidson, W. M. B.: Plastic Peritonitis and Renal Emboli Produced by Thymus Extract. Glasgow M. J. 36: 20-24, 1955.
4. Davis, H. L., and Musselman, M. M.: Blood Particle Agglomeration and Fat Embolism. Internat. Rec. Med. 167: 439-448, 1954.
5. Glas, W. W., Grekin, T. D., Davis, H. L., and Musselman, M. M.: An Experimental Study of the Etiology of Fat Embolism Am. J. Surg. 91: 471-480, 1956.
6. Halasz, N. A., and Marasco, J. P.: An Experimental Study of Fat Embolism. Surg. 41: 921-929, 1957.
7. Hartroft, W. S.: Fat Emboli in Glomerula Capillaries of Choline-Deficient Rats and of Patients with Diabetic Glomerulosclerosis. Am. J. Path. 31: 381-397, 1955.
8. Jacob, K. C.: Fatal Fat Embolism Following Criminal Violence. J. Indiana M. A. 26: 424-426, 1956.
9. Johnson, S. R., Rieger, A., and Svanborg, A.: Fat Embolism: Discussion on case histories and pathogenesis. Acta Chir. Scandinav. 110: 389-393, 1956.
10. Johnson, S. R., and Svanborg, A.: Investigations with Regard to the Pathogenesis of So-Called Fat Embolism; Serum Lipids and Tissue Esterase Activity and the Frequency of So-Called Fat Embolism in Soft Tissue Trauma and Fractures. Ann. Surg. 144: 145-151, 1956.
11. Kearns, T. P.: Fat Embolism of the Retina; Demonstrated by a Flat Retinal Preparation. Am. J. Ophth. 41: 1-2, 1956.
12. Kent, S. P.: Fat Embolism in Diabetic Patients without Physical Trauma. Am. J. Path. 31: 399-403, 1955.
13. Love, J., and Stryker, W. S.: Fat Embolism: A Problem of Increasing Importance to the Orthopedist and the Internist. Ann. Int. Med. 46: 342-351, 1957.
14. Lynch, M. J.: Nephrosis and Fat Embolism in Acute Hemorrhagic Pancreatitis. Arch. Int. Med. 94: 709-717, 1954.
15. McKeown, F.: Fat Embolism in Thoracic Operations. Brit. M. J. 1: 150, 1955.
16. Mears, B. J.: Fat Embolism. Minnesota Med. 37: 686-687; 693, 1954.
17. Nelson, T. G., and Bowers, W. F.: Fat Embolism: An Analysis of Four Fatal Cases. Arch. Surg. 72: 649-658, 1956.
18. Peltier, L. F.: Collective Review: An Appraisal of the Problem of Fat Embolism. Internat. Abst. Surg. 104: 313-324, 1957.
19. Peltier, L. F.: Fat Embolism: The Prophylactic Value of a Tourniquet. J. Bone and Joint Surg. 38-a: 835-840, 1956.
20. Peltier, L. F.: Fat Embolism. 1. The Amount of Fat in Human Long Bones. Surg. 40: 657-660, 1956.
21. Peltier, L. F., Wheeler, D. H., Boyd, H. M., and Scott, J. R.: Fat Embolism 11. The Chemical Composition of Fat Obtained from Human Long Bones and Subcutaneous Tissue. Surg. 40: 661-664, 1956.
22. Peltier, L. F.: Fat Embolism. 111. The Toxic Properties of Neutral Fat and Free Fatty Acids. Surg. 40: 665-670, 1956.
23. Pearsall and Weaver: Fat Embolism with Case History. Virginia M. Monthly 81: 215, May 1954.
24. Saikku, L. A.: Fat Embolism in Connection with Treatment of Fractures. Acta Chir. Scandinav. 108: 275-282, 1954.
25. Schofield, H. L., and Pratt-Thomas, H. R.: Fat Embolism following Abdominal Surgery; Report of a Case. J. South Carolina M. A. 52: 7-9, 1956.
26. Scully, R. E.: Fat Embolism in Korean Battle Casualties; its Incidence Clinical Significance, and Pathologic Aspects. Am. J. Path. 32: 379-403, 1956.
27. Taquini, A. C., Roncoroni, A. J., and Aramendia, P.: Fat Embolism of the Lungs. Am. Heart J. 51: 468-474, 1956.
28. Weber, L. W.: Fat Embolism. Minnesota Med. 39: 775-777; 779, 1956.
29. Webster, J. E., Martin, F. A., and Gurdjian, E. S.:

Response of the Pial Circulation to Fatty Emboli Studies by Cinemicrophotography. Am. J. Surg. 89: 809-813, 1955.

30. Kuntscher, J.: Die Marknogelung bei Knochenbrucken, Ztschr. Orthop. 74: 1943.

31. Zenker, F. A.: Beitr.z.norm. u. path. Anat.d. Lunge, 1862.

32. Rappaport, H., Raum, M., and Horrell, J. B.: Bone Marrow Embolism. Am. J. Path. 27: 407 (May-June) 1951.

33. Churchill, E. D.: Mechanism of Death in Massive Embolism with Comments on Trendelenburg Operation. Surg. Gynec. & Obst. 59: 513 (Sept.) 1934.

34. Caldwell, George T., and Huber, Harry L.: Fat Embolism following Trauma to Bones. Surg. Gynec. & Obst. 25: 650-663, 1917.

35. Cramer, D. L., and Brown, J. B.: The Component Fatty Acids of Human Depot Fat. J. Biol. Chem. 151: 427-438, 1943.

36. Dunphy, J. E., and Ilfield, Fredric W.: Fat Embolism. Am. J. Surg. 77: 737-743, 1949.

37. Eckstein, H. C.: The Fatty Acids in the Subcutaneous Fat of Man. J. Biol. Chem. 64: 797-806, 1925.

38. Elkes, Joel: Studies in the Aetiology of Fat Embolism and its Relation to the Use of Finely Dispersed Oil-in-Water Emulsions in Intravenous Alimentation. Thesis. Univ. Birmingham, April 1949.

39. Glas, W. W., Grekin, T. D., Davis, H. L., and Musselman, M. M.: An Experimental Study of the Etiology of Fat Embolism. Am. J. Surg. 91: 471-480, 1956.

40. Glas, W. W., Grekin, T. D., Davis, H. L., and Musselman, M. M.: The Source of Fat in Fat Embolism. Arch. Surg. 71: 600-604, 1955.

41. Griffen, George D. J., and Essex, Hiram E.: Experimental Embolism of the Pulmonary Arterioles and Capillaries. Surg. 26: 707-721, 1949.

42. Harmon, John W., and Ragatz, Florian J.: The Pathogenesis of Experimental Fat Embolism. Am. J. Path. 25: 809-810, 1949.

43. Harris, R. I., Perrett, T. S., and MacLachlin, Angus: Fat Embolism. Ann. Surg. 110: 1095-1114, 1939.

44. Hedri, Andreas: Arch f. klin. Chir. 138: 596-601, 1925.

45. Lehman, Edwin P., and Moore, Robert M.: Fat Embolism, including Experimental Production without Trauma. Arch. Surg. 14: 621-662, 1927.

46. Macht, David I.: Absorption of Drugs through the Bone Marrow. Proc. Soc. Exp. Biol., N. Y. 47: 299-302, 1941.

47. Monson, Einer, M.: The Diagnosis and Treatment of Fat Embolism. Thesis Univ. of Minnesota, June 1951.

48. Newman, P. H.: The Clinical Diagnosis of Fat Embolism. J. Bone Surg. 30B: 290-297, 1948.

49. Porter, W. T.: Fat Embolism, A Cause of Shock. Boston Med. & Surg. J. 176: 248, 1917.

50. Robb-Smith, A. H. T.: Pulmonary Fat Embolism. Lancet 1: 135-141, 1941.

51. Robertson, James F.: The Function and Metabolism of Calcium in the Invertebrata. Biol. Rev. Cambridge Philos. Soc. 16: 106-133, 1941.

52. Schuttemeyer, W.: Klinishe Auswertungen der lipasebestimmungen zur Diagnose der fettembolie. Arch. Klin. Chir. 270: 50-53, 1951.

53. Schuttemeyer, W., and Flack, A.: Neue Untersuchungsmethode zur diagnose der fettembolie Chirurg. 21: 289-292, 1950.

54. Scriba, J.: Untersuchungen ueber der fettembolie. Deut. Zschr. Chir. 12: 118-220, 1880.

55. Scuderi, Carlo S.: Fat Embolism: a Clinical and Experimental Study. Surg. Gyn. & Obst. 72: 732-746, 1941.

56. Sutton, George E.: Pulmonary Fat Embolism and its Relation to Traumatic Shock. Brit. M. J. 2: 368-370, 1918.

57. Swank, Roy L., and Dugger, Gordon S.: Fat Embolism: a Clinical and Experimental Study of the Mechanisms Involved. Surg. Gyn. & Obst. 98: 641-652, 1954.

58. Tocantins, L. M.: Rapid Absorption of Substances Injected into the Bone Marrow. Proc. Soc. Exp. Biol. 45: 293-296, 1940.

59. Warren, Shields: Fat Embolism. Am. J. Path. 22: 69-80, 1946.

60. Warthin, A. S.: A Critical Evaluation of Traumatic Lipemia and Fatty Embolism. Internat. Clin. 4: 171-227, 1913.

61. Whitson, Robert O.: A Critique of Fat Embolism. J. Bone Surg. 33A: 447-450, 1951.

62. Wright, Robert B.: Fat Embolism. Ann. Surg. 96: 75-84, 1932.

63. Best, C., and Taylor. N.: Physiological Basis of Practice of Medicine. pp. 956-975, Ed. 2. Baltimore, Williams & Wilkins, 1939.

64. Koritschorner, R., and Sophian, A.: Fat Embolism. J. Missouri M.A. 33: 48-52, 1936.

65. Key. J. O., and Lottes, J. O.: Medullary Fixation of the Femur: Complications and Errors in Technique. Am. Acad. Orthop. Surgeons, Lect. 8: 33, 1951.

66. Farris, Jack Matthews: Thrombosis and Embolism. Surgical Clinics of North America, pp. 1271-1287, 1954.

67. Price, K. C., Hata, D., and Smith, J. R.: Pulmonary Vasomotion Resulting from Miliary Embolism of the Lungs. Am. J. Physiol. 182: 183, 1955.

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Public Health . . . .

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State Health Commissioner of Virginia

Staphylococcal Infections in Hospitals (Continued)

Staphylococcal Disease on Surgical Services. It should be recalled that before antibiotics were known, staphylococci were the wound pathogens found in about two-thirds of all infections.

Clinical infection may be prevented in wounds produced by trauma by prompt and adequate removal of devitalized tissue and foreign bodies. The exact pathways by which staphylococci gain access to clean wounds are not known. A number of considerations suggest that the majority of clean wounds which have become seriously infected may have been seeded in the operating room. The deep-seated nature of the central focus, the frequent association with hematomata, the time of appearance following operation (usually noted at first dressing), and the known difficulty of experimentally infecting a sutured wound after a few hours have elapsed, are reason for this belief. A high percentage of opened or drained wounds will become colonized with staphylococci by cross-infection on the wards. This may happen without clinical manifestations and with little or no effect on the wound itself. This wound then becomes a reservoir of potentially virulent strains which may result in an outbreak.

Burns usually acquire profuse bacterial flora which reflect the patient's environment. There is evidence that burned patients, who in former years would have died during the first two or three days from fluid and electrolyte imbalance, are now saved to develop fatal sepsis. Staphylococci are the most significant organisms found in burned patients.

Staphylococcal disease concerns all of the surgical specialties. Severe outbreaks have been reported on thoracic services; problems involving bones and joints have followed radical surgery; urinary tract infections have been well documented; endocarditis and myocardial stitch abscesses have followed heart and great vessel surgery; enteritis, fatal parotitis, increased incidence of empyema in children, pneumonia in adults, respiratory infections in all ages have all been attributed to the staphylococcus.

Certain fundamental principles that have served the surgeon well in the past to prevent infection must be revised and adhered to strictly. The first and most important is surgical technique. Rigid aseptic and antiseptic methods are almost equally important. Good old-fashioned hospital cleanliness must be applied by all disciplines.

Separate operating rooms for clean and "dirty" cases are not recommended. All operating rooms should be cleaned between operations and meticulously so after an operation on a contaminated case. "Dirty" cases should be placed at the end of the operating schedule.

Operating room clothing must not be worn outside the operating room. Visitors to the operating room must change completely from street clothing before entering the operating room.

Patients should be brought to the operating room on a stretcher that has been thoroughly cleaned and covered with freshly laundered linens supplied by the operating room. They should not be covered with blankets from the wards.

Once the disease is established, isolation techniques must be practiced to prevent cross-infection. When a barriee nursing system is set up, it must be honored by all, physicians as well as nurses. Prompt incision and drainage or possibly a more agressive debridement and early secondary closure may be indicated.

There is no doubt that meticulous surgical technique and judgment can result in a staphylococci wound infection rate of practically zero. To bring this about:

1. Technique should be an adequate scrub technique combined with a thorough alcohol rinse of the skin.
2. Gentle handling of tissues and minimal usage of plain and chronic catgut, particularly in the parietes.
3. Routine closure of all surgical wounds with interrupted alloy steel wire is an important technical step.
4. Copious saline irrigation of wounds mechanically removes necrotic fat, blood clots, and also organisms which have seeded the wound during the time of the operative procedure.

5. Conversation during the course of an operation must be minimized to prevent a constant spray of organisms into the surgical wound.

6. Ill-advised drainage with irrigating foreign materials should be abandoned.

7. Local use of antibiotic agents prophylactically at the time of closure of uncontaminated, clean surgical wounds is open to question. Antibiotics are not effective in the presence of necrotic tissue or in an abscess. Their function is one of protection against invasive infection and metastatic complications incident to the surgical attack upon the lesion. When used, one must be selected to which the organism is apparently vulnerable.

8. Every effort should be made to minimize cross-infection through contaminated dressing carts and faulty dressing care.

9. It should be remembered that sterilization of anesthetic and endoscopic apparatus, stethoscopes, ophthalmoscopes, sphygmomanometers, etc., is necessary in epidemics to control spread of infection.

It would appear essential for every surgical service to keep a running record of its infection rates from year to year as a guide and measure of the success of its preventive program.

Staphylococcal Disease on General Medical Services. The life threatening staphylococcal disease syndromes observed in medical patients are staphylococcal bacteremia with metastatic involvement of many organs and staphylococcal pneumonia. Staphylococcal enterocolitis is more apt to occur in surgical patients. Primary hematogenous osteomyelitis is rare but metastatic osseous lesions frequently complicate the course of disseminated staphylococcal infections. The magnitude of the problem on medical services is not known and mortality figures do not convey information concerning its scope. Statements concerning morbidity give a clearer notion. Large outbreaks of the disease are unusual on medical services. Infections arise in patients already seriously ill with other unassociated diseases. Patients with leukemia, Hodgkin's disease, metastatic malignancies, diabetes, disseminated lupus erythematosus, renal failure, and chronic pulmonary disease are examples. Patients with exfoliative dermatitis, influenza, or any local surgical procedure, and patients receiving steroids or corticotropins, nitrogen mustards, radiation, folic acid antagonists, and even broad spectrum antimicrobial therapy are very suspectible.

Hospital-acquired staphylococcal disease decreases the efficiency of hospital operation, prolongs the stay of individual patients, increases the cost of medical care and jeopardizes the recovery of some patients. Many patients infected while in the hospital do not develop a recognizable infection until some time after their discharge and detection of its presence in the community becomes essential to delineation of the hospital problem and its control. A number of infants develop the first signs of infection after discharge from the hospital and transmission from them to their mothers takes place in the home. The epidemic strains are readily transmitted to other family members, persist for long periods within the family, and are responsible for endemic staphylococci disease within the family unit. A very significant community outbreak will follow uncontrolled strain specific nursery outbreaks. There is no satisfactory approach to eradication of epidemic strains from the family and the disease may be expected to recur over long periods despite repeated attempts to eradicate it.

(*To be continued in next issue*)

Ref: Hospital-Acquired Staphylococcal Disease. Proceedings of the National Conference, September 1958, sponsored by the U.S. Public Health Service and the National Academy of Sciencies.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE

	Jan. 1959	Jan. 1958
Brucellosis	2	0
Diphtheria	2	5
Hepatitis	26	29
Measles	1341	434
Meningococcal Infections	7	10
Meningitis (Other)	20	17
Poliomyelitis	2	0
Rabies (In Animals)	16	43
Rocky Mt. Spotted Fever	0	0
Streptococcal Infections	1014	529
Tularemia	4	8
Typhoid Fever	1	4

Mental Health . . . .

JAMES B. FUNKHOUSER, M.D.
EDNA M. LANTZ
Richmond, Virginia

Mental Hospital Population, Drugs and Rehabilitation

One of the big factors influencing the size of Virginia's hospital population is the rate at which patients return after discharge. Although all but a few psychiatrists have given up the theory that the moon has an influence on mental illness, State hospital authorities know that the rate of return, as well as the rate of first admission, is strongly influenced by matters somewhat beyond medical control. For example, the hospital census curiously enough fluctuates with the seasons. November, December, January, February were the low months from '52 through '58 (and before). (See Chart 1)

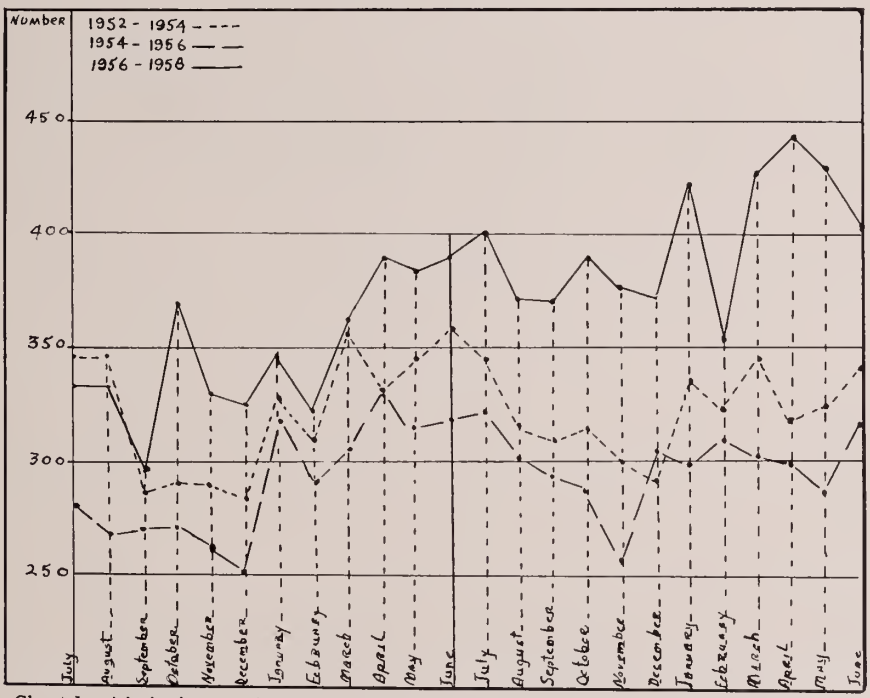


Chart I - Admissions to the four Virginia Mental Hospitals by months for fiscal years from July 1952 - June 1958.

But more important than the seasonal change is the influence of social and economic climate. Long term studies in other states, as well as Virginia, show that the first admission rates and return rates are higher during economic depression and lower during prosperous times. For example, they are lower during war than peace time. War probably drains the fully fit young men away from jobs that can then be handled by physically and mentally handicapped and so such people can survive economically outside the hospital. (See Chart 2) The two low points on the first admissions represent World War II and the Korean War. Readmissions were only slightly influenced by the two wars.

The advent of tranquilizing drugs, so extravagantly proclaimed by the lay press, and some professional journals, was given most of the credit for the slight population drops or leveling off of the census in mental hospitals throughout the country last year. Enthusiasts foresaw the eventual emptying of our mental hospitals and a new era for psychiatry.

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

Little credit was given to the favorable, socio-economic weather which notoriously affects first admission and return rates.

Practically no credit was given for the stepped-up intensive treatment program in the hospitals. This was directly the result of higher salaries for hospital personnel, increased staffs, etc.—also the result of economic prosperity.

Not enough credit was given to the weight of accumulated years of effort by mental health associations and other organizations who have gradually educated the public, the employer and industry into what may be called "community acceptance of the mentally handicapped".

However, a reaction to the factors which reduce hospital populations—drugs, intensive treatment, prosperous general economy, community acceptance (and to whatever factors such as the moon or sun spots which are still unguessed) has apparently set in.

Our hospital population is slowly rising again or is levelling off. (See Chart 3) Despite seasonal dips in December and January, the graph shows that the trough of 1957-1958 is beginning to swell. This is the same in other states with whom Virginia has a comparable reporting system.

Since the medical profession cannot hope to directly or appreciably alter the non-medical factors,

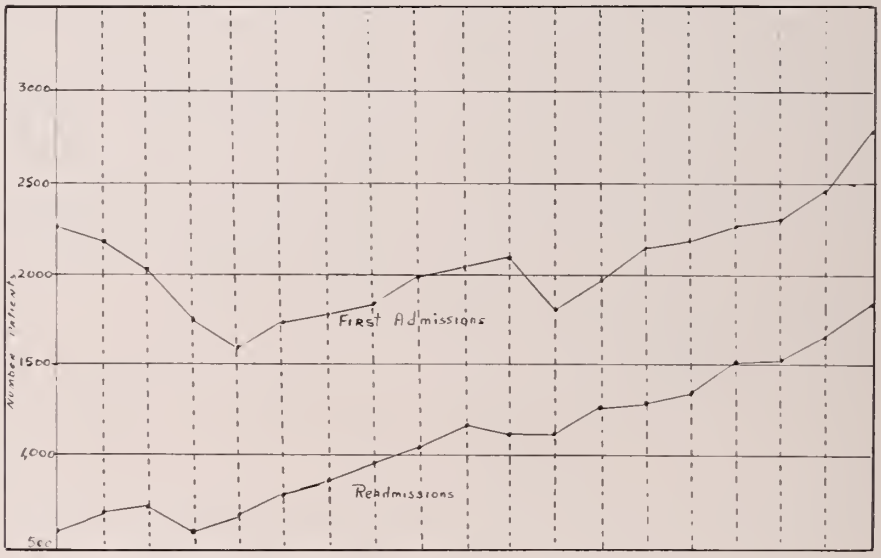


Chart II - First admissions and readmissions to the four Virginia Mental Hospitals by years for period 1940 - 1958.

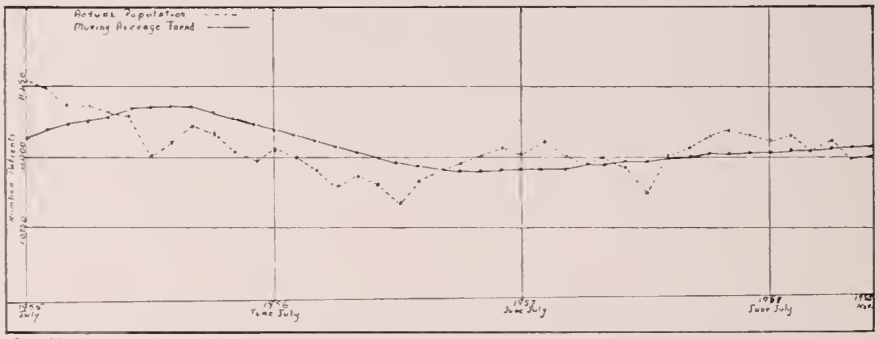


Chart III - Patients resident in the four Mental Hospitals in Virginia and moving average population by month from July 1955 to November 1958 (Dots between dates denote intervening months).

Community acceptance, however, has a companion factor, actually an opposing factor, which might be called "hospital acceptance". This is brought about by mental health information which leads to new cases being diagnosed earlier, people accepting hospitalization more readily and being admitted sooner. This in turn means better treatment results, sooner discharge, etc.

it means that our State institutions, already overcrowded, will become more and more overcrowded unless efforts are redoubled in directions where medical influence can be felt. We will have to further intensify our treatment program. (This means recruitment and enlargement of staff.) We will have to educate the public into even greater community acceptance of the discharged mental patient. The

other alternative is to build bigger hospitals.

Paradoxically the new tranquilizing drugs have not, as might be expected, reduced the need for nurses, doctors, social workers and rehabilitation experts. The drugs have actually created a demand for more personnel since they render many more patients suitable, amenable and feasible for psychotherapy and rehabilitation.

Among the leaders in the effort to return the patient to the community are the State and Federal officers of Rehabilitation. Initially designed for the physically handicapped, rehabilitation programs since 1946 include the mentally handicapped as well as the physically handicapped. Somewhat surprisingly, the mentally handicapped are often the very best and most suitable candidates for rehabilitation efforts. This can probably be explained by the fact that adult mental patients do no lose their vocational skills during a period of mental sickness. When they recover their mental heath, they do not have to be taught a new trade or vocation, as is usually the case with the physically handicapped individuals.

It has been abundantly proved by a number of studies that approximately two-thirds of the mental cases feasible for rehabilitation are successfully restored to gainful employment. A local study in Virginia jointly conducted by the Veterans Administration and the Virginia State Office of Rehabilitation showed that out of 75 mentally handicapped patients studied, 40 were accepted for training and 33 were employed. The annual income of the group employed was $93,245.00, an average for the individual of $2,825.00. This amount was $600.00 better than for the total (mental and physical) group of the handicapped.[1]

In other words, the mentally handicapped did better than the physically handicapped so far as economic rehabilitation was concerned. Recent studies in Massachusetts[2] show that mental patients are still gainfully employed 2 1/2 years after leaving the hospital. It is of considerable interest that a half of the patients in both of these studies are schizophrenics.

Aside from the humane considerations, there are strong arguments inherent in these figures to prove the wisdom of rehabilitation for the mentally ill. It is far better for a patient to be gainfully employed in the community as a consumer and a tax payer than to become a social drone by permanent residence in mental institutions, which are expensive to build, staff and maintain.

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1. Dawson, A. R. and Anderson, R. N.: "Placement of Rehabilitated Patients" Journal American Medical Association, Oct. 8, 1955, Vol. 159, pp. 557-559.
2. Lindner, M. P. and Landy, D.: "Post Discharge Experience and Vocational Rehabilitation Needs of Psychiatric Patients", Mental Hygiene, Jan. 1958, Vol. 42, #1, pp. 29-44.

Work for Heart Patients

Common sense and observation are the only basis on which a doctor can decide whether a heart attack victim should return to work.

In spite of all the material written and all the advice given, there is no way in which the doctor can tell if his patient should return to work except through his own "common sense and clinical judgment," according to a guest editorial in the February Journal of the American Medical Association.

Dr. Leonard J. Goldwater, Columbia University, New York, said interest in occupational activities for cardiac patients seems to be at an all-time high. Most studies indicate that most cardiac patients can safely return to work. Only a few need changes in occupation.

Before the doctor can decide about his individual patient, he must take a number of features into consideration. They include the patient's age, and previous occupational activity, the cause of his heart disease, the nature of the heart condition, the need for and response for treatment.

"Knowledge of the physical and emotional stress of the patient's job obviously constitute an indispensible part of the evaluation. Transportation problems and extraoccupational activities cannot be overlooked."

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

Richmond Blue Shield Directors

The Board of Directors of Virginia Medical Service Association, the Blue Shield Plan headquartered in Richmond, is composed of thirty-five persons: twelve physicians appointed by The Medical Society of Virginia; twelve physicians elected by the Participating Physicians; and eleven persons, also elected by the Participating Physicians (corporate membership), who represent the subscribing public. The physician Board Members should, of course, represent not only different specialists but also the several geographical regions of the area served by the Blue Shield Plan. That such is the case is apparent from a perusal of the list of Board Members for 1959 which is presented below. In summary, the specialties are numerically represented as follows: Internal Medicine, 5; General Surgery, 4; General Practice 4; Obstetrics-Gynecology, 3; Pediatrics, 2; and Anesthesiology, EENT, Orthopedics, Psychiatry, Radiology, and Urology each are represented by one physician. These twenty-four physicians, in turn, represent fourteen different communities or sections of the Plan's service area.

What are these physician-Directors of Blue Shield doing?

Most obvious is the fact that, through Blue Shield, they are helping one out of every five Virginians to prepay for basic medical service.

Through Blue Shield they are setting the pace and pattern for the evolution of the entire voluntary medical care insurance program in the United States.

Through Blue Shield they are proving that medical care can be prepaid by voluntary cooperation of doctor and patient—with free choice of physician for the patient, fee-for-service for the doctor, and a private confidential relationship between them—and that the people of Virginia like it that way.

Through Blue Shield they are showing that patients and doctors do not need an outside agency to bring them together, and that no one but the patient himself needs to profit from prepayment of medical care costs.

Through Blue Shield they are conducting an effective demonstration that physicians can solve urgent and complex social problems within the framework of private enterprise.

Theirs is a big job. They need the help, suggestions, and day-to-day cooperation of all members of the medical profession they represent.

* * * * * * * * * * * * * * * * *

* Mason C. Andrews, M.D., Obstetrics and Gynecology, Norfolk.

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Mr. William T. Brunot, Comptroller, Reynolds Metals Company, Richmond.

F. Ashton Carmines, M.D., Orthopedic Surgery, Newport News.

George Cooper, Jr., M.D., Radiology, Charlottesville.

* Russell M. Cox, M.D., Pediatrics, Portsmouth.

Mr. R. B. Crawford, President, Kilkare Laundry, Farmville.

Mr. John E. Damerel, Director of Personnel, City of Richmond, Richmond.

Frank D. Daniel, M.D., General Practice, Charlottesville.

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Mr. S. Douglas Fleet, Vice-President and Sales Manager, Albemarle Paper Mfg. Co., Richmond.

William Grossman, M.D., Pediatrics, Petersburg.

* Randolph H. Hoge, M.D., Gynecology, Richmond.

Guy W. Horsley, M.D., General Surgery, Richmond.

Mr. M. A. Hubbard, Executive Secretary, Virginia Farm Bureau Federation, Richmond.

Mr. William H. King, Attorney, Richmond.

Charles H. Lupton, M.D., General Surgery, Norfolk.

Mr. James Mann, Jr., Attorney, Norfolk.

*Directors selected by The Medical Society of Virginia.

Mr. William Meacham, Associate Editor, Norfolk-Virginia Pilot, Norfolk.

*Harold W. Miller, M.D., General Practice, Woodstock.

* Claude A. Nunnally, M.D., Internal Medicine, Fredericksburg.

* Wilkins J. Ozlin, M.D., Urology, South Hill.

H. Grant Preston, M.D., Ophthalmology and Otolaryngology, Harrisonburg.

* Benjamin W. Rawles, Jr., M.D., General Surgery, Richmond.

Edwin Rucker, M.D., Obstetrics and Gynecology, Richmond.

* William C. Salley, M.D., Internal Medicine, Norfolk.

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* John R. Saunders, M.D., Psychiatry, Richmond.

Ernest G. Scott, M.D., Internal Medicine, Lynchburg.

McKelden Smith, M.D., Internal Medicine, Staunton.

Mrs. Ben Wailes, Dean of Women, Sweet Briar College, Sweet Briar.

Thomas Walker, M.D., Anesthesiology, Richmond.

* D. Edward Watkins, M.D., General Surgery, Waynesboro.

Mr. Morris W. Whitaker, Secretary, Allen-Morrison Sign Company, Lynchburg.

* Fletcher J. Wright, Jr., M.D., General Practice, Petersburg.

* Julian H. Yeatman, M.D., General Practice, Fork Union.

Research Dog Hero

The National Society for Medical Research has formally conferred the title of Research Dog Hero of 1958 on a mixed-breed, three-year-old dog from the Deep South. The dog is Big Ben, a large, mostly German shepherd animal. He was selected for the honor because of his part in Tulane University research which has placed medical scientists on the threshold of a startling new technique for attacking brain cancers.

Ben, a roguish, clownish canine according to the men who worked with him at Tulane, has "retired" from service as a research animal and is the adopted pet of a New Orleans family.

His outstanding service to science took place during a year long period, in which he provided living proof of the feasibility of a new "perfusion" treatment for deadly brain tumors.

He was twice the subject of experiments which showed that the technique called perfusion could be useful in the battle against cancer in human limbs and other organs. He also served as a blood donor for other animals. Once Ben had his own life saved by an emergency operation to stop a massive hemorrhage in his neck.

Through perfusion, medical men now can use drugs at two to three times the strength otherwise possible. If injected directly into the regular blood stream in such amounts, they would destroy vital tissue and would be fatal.

And it was Big Ben's medical career which made possible the improvement of this technique to the point where the brain, which is often the site of deadly tumors, can be successfully perfused in experimental animals.

To date, the perfusion treatment has been used in 73 instances on human patients' limbs and organs at Tulane. Brain perfusion has yet to be attempted on a human being. But it is likely that it soon will be, and Tulane medical scientists mark Big Ben's contribution as a milestone in medical progress against one of nature's cruelest diseases.

The big dog arrived at the Tulane medical school last year at the time when basic work was being done in perfusion. He had been sent to the school after being picked up as a stray in Mississippi.

The scientists' problems then were to determine how much anti-cancer drug could be used without seriously endangering normal tissue, and to develop a proper method to tie the heart-lung machine into the circulatory system of the limb or organ involved.

Big Ben had done his job. He deserved a home of his own. As soon as this was made public, applications flooded into the school. These were carefully screened and in August, Ben became the pet, playmate and watchdog of a local family with three children.

In the past four months, Ben has been one of the luckiest of lucky dogs. He is a beloved pet and a neighborhood celebrity.

The award presented by the National Society for Medical Research is a special collar bearing a silver plate with an inscription identifying Big Ben as Research Dog Hero of 1958.

Miscellaneous . . . .

Excerpts from A.M.A. Planning Conference in the Field of Aging, September 13-14, 1958.

The problems confronting American medicine are many and complicated. While it has always been true, more and more these problems seem to enunciate themselves in terms which require concerted action for coordinated approaches by the individual physician and organized medicine at all levels.

The time arrived a few years ago for organized medicine to devote more thought and action to the political and socio-economic phase of medicine. The physician should not be like the ostrich hiding his head in the sand, while those people who always want something for nothing and do-gooders unite with those of socialistic ideas and try to enforce them on others by concerted congressional action.

The busy physician is prone to forget that each of these measures enacted bring Socialized Medicine just a step nearer and I believe that unless some drastic action is taken immediately the Forand Bill will pass this Congress. The medical profession seems not to worry too much until such a bill is ready to pass, then they arrive too late and with too little to prevent the passage.

The medical profession and the voluntary health insurance agencies realize that something has to be done to furnish care and medical aid to our aging citizens over 65 years of age with reduced incomes and modest resources. Voluntary health insurance plans must be inaugurated *immediately* that will be acceptable both to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens. The American Medical Association, the constituent and component medical societies, and physicians should expedite the development of effective voluntary health insurance for the above group with modest resources or low family incomes. The physician should agree to accept a level of compensation as full payment for medical services rendered to this group which will permit the development of such insurance at a premium rate that these aging citizens can afford to pay.

The American Medical Association's responsibility in any medical problem is to develop broad policies and to offer leadership. These policies must be practical and capable of adaptation to the needs of the individual state and counties.

The state medical societies, standing as they do in a middle position, are important keys to an effective approach to the problem of the aged or any other problem. The state society can adopt the policies enunciated nationally and adapt them to the circumstances of their own state. State societies have a major responsibility for keeping informed as to what non-medical groups are doing and for representing medicine's viewpoint with such groups. As we come close to the grass roots, such liaison becomes increasingly important.

What can physicians do to help the financing problem?

1. Make it possible for insurers to offer benefits more in keeping with health care costs.

2. Provide a basis upon which purchasers of insurance can select realistic levels of benefits.

3. In the event that co-insurance is involved, it should be possible for the subscriber or policyholder to plan, in advance, the extent of his participation in costs.

Expensive diagnostic methods and therapy should be altered to the limit compatible with good medical care. Overutilization of diagnostic techniques and therapeutic agents, always undersirable, is particularly significant today because of cost. We should cooperate with the insurers by reducing hospital admissions and stay. Every patient who is sent to a hospital for a diagnostic procedure, which could have been done in the office increases the cost of medical care.

Aging is one of the developmental phases in the life span of human beings. The aging or the aged are people in a certain period of life and, as people, have the same qualities and needs that people at any life period have. They have some needs as the child has, the young adolescent and adult, the basic needs of being wanted, of being loved, of being needed, of being productive, of being part and parcel of their environment, and belonging to a larger order of things.

A significant number of persons 65 and over are not indigent. True, their incomes may be less than formerly and their savings may be diminished. Many are retired. Their health or medical care needs in many instances are somewhat different from those who

are younger and still in active employment. I feel that the vast majority of our senior citizens want to feel independent. Moreover, they want to pay their own way. To meet these circumstances and to assist them in planning payment for their medical care, physicians through their medical societies could make special arrangements, including reduced fees where necessary or desirable.

A six point program which offers the solid, positive groundwork for the solution of the many-sided geriatric problem must:

1. Promote health maintenance and restorative services.

2. Encourage the training of personnel and the development of facilities for the care of the aged.

3. Cooperate in developing community programs for senior citizens.

4. Expand medical and socio-economic research in reference to aging and the aged.

5. Improve methods of financing health care for the aged.

6. Inspire a coordinated program which will seek public acceptance of a proper perspective toward older citizens.

Whoever, we are, professional men or business men, we all share the social obligation of giving aged people a chance to live a productive life. Because a person reaches an age of 65, 62 or 60 with his capabilities and his desire for productive work still alive and strong, such a person should not be fenced apart from everyone else by an artificial barrier, either for his own sake, or for the sake of economy. Ability backed by years of experience, by a deeper knowledge of living, and by the wisdom of human problems is worth saving. By the same token, the person of advancing years has the social obligation to continue to contribute both to his own welfare and to the economy.

W. Linwood Ball, M.D.

Editor's Note: Dr. Ball is vice-president of the American Medical Association and also a delegate from The Medical Society of Virginia.

Putting a Publication "To Bed"

Ever stop to consider how much work is involved in getting out a magazine? This may give you an idea.

Regardless of its size, every magazine consists of a bunch of separate articles or stories, each theoretically based on what is commonly known as an idea.

It is popularly supposed that such ideas leap nimbly from the mind of the editor. Occasionally they do. More often, however, the idea is the brainchild of some struggling writer who, faced with a deadline and a blank piece of paper, must create something out of nothing in no time flat.

In addition to this simple requirement, the writer is expected to dig, delve, probe, and come up with a batch of interesting facts. Even if they are dull as dishwater, he is supposed to make them *sound* interesting. If he succeeds, he is sometimes given a byline.

Once the writer has painfully whittled his idea into finished form. it is subjected to another long and arduous process known as putting the publication "to bed."

This process is carried out by a group of unsung heroes generally described as artists, photographers, engravers, typesetters, proofreaders, make-up men, printers, and bindery workers. These gentlemen are usually anonymous but their jobs have the advantage of being conducted during normal working hours. This allows them to have dinner with their families, a privilege not always shared by the writer.

The second step in transforming the idea into finished form falls on the artist or layout man, who arranges the text to fit the space and decides upon the illustrations to be used and where they shall be placed. Frequently, this genius also supervises the photographer. When drawings are used instead of photographs, the artist also had the pleasure of drawing them.

The artwork and photos then go to an engraver.

The engraver's craft is an old an honorable one but too technical to explain here. Suffice it to say that making an engraving takes anywhere from several hours to several days, depending upon the engraver's disposition and the amount of work in his shop. His disposition frequently proves the determining factor.

While the engraver is performing his miracles, the type is set by a typographer. Some is set by machine and some by hand. Proofs are then pulled and corrected by scholarly printing company em-

ployees known as proofreaders. In addition to having an eagle eye, they must also know how to spell every word in the dictionary.

Next, the type and engravings are locked up in a big metal form by a make-up man, who must see that everything fits together as shown on the layout. Sometimes this can't be done, cold metal being an obstinate thing, and the writer and layout man are called on to cut out some of the words or alter the layout so the masterpiece will fit the space. This is one reason why writers have ulcers and some layout men are prone to strong drink.

At this stage the locked-up form is ready to go to press. This is known as "putting the publication to bed." Once it has gone to bed, all concerned breathe a sigh of relief. All, that is, except the pressmen and the people in the bindery, who are supposed to see that the printing presses produce exactly the right colors and that the pages are folded and stitched in the order intended.

Of all the people involved in these procedures, probably those deserving the most sympathy are the writer, the typographer, and the proofreader. They *have* to read the stuff! Fortunately for the rest—they *don't*. A blessing shared, it might be added, by the gentle reader, who can pass up the whole caboodle with complete unconcern for all the time and effort it took to put the publication "to bed."—*Tennessee Progress*

Values of Autopsy

Autopsy, "the operation no one talks about," should be talked about—long before there is any need for it. Every family should discuss the question of autopsy and decide how it feels about the operation, thus simplifying the decision when a family member dies. This recommendation was made in an article in the February Today's Health, published by the American Medical Association.

Autopsy can "bring peace of mind to the patient's family and the gift of life itself to future generations." Yet many persons object to post-mortem examinations. Their objections are often based on misconceptions.

There is no fee for performing an autopsy. It can be performed in less than two hours, and will not, as many persons think, delay the funeral.

There is little fact to substantiate the statement that autopsy is against a person's religion. The article quoted Protestant and Roman Catholic leaders as saying there is no objection to autopsy in their churches. While Orthodox Judaism forbids autopsy, Reform Judaism does not.

Another objection is "The patient has suffered too much already." This attitude expresses the feeling that the patient still exists and is capable of feeling pain.

Three reasons why post-mortem examinations are important were cited. They are:

—Some diagnoses cannot be made by observation. Tumors of the brain, for example, may spread to the lung, but the location of the primary lesion can't be demonstrated without autopsy.

—For research purposes. Correct diagnosis still remains the most difficult and fundamental part of a doctor's job. Whatever his field of specialization, there is perpetual interest in research, and autopsy is one of the most valuable aids.

—To find an explanation for symptoms (often coincidental) which do not fit in with the patient's primary disease.

Through autopsy, a doctor may learn how to prevent certain diseases from recurring within a family, thus prolonging life expectancy. Autopsy may also explain why a person died and thus relieve a family member's mind. And finally it may provide information of value in the advancement of general medical knowledge.

Woman's Auxiliary . . . .

President—Mrs. Charles A. Easley, Danville
President-Elect—Mrs. Walter A. Porter, Hillsville
Vice-Presidents—Mrs. George K. Brooks, Richmond
Mrs. James M. Moss, Alexandria
Mrs. W. A. Eskridge, Parksley
Recording Secretary—Mrs. Robert B. Keeling, South Hill
Corresponding Secretary—Mrs. J. J. Neal, Danville
Treasurer—Mrs. Wyndham B. Blanton, Richmond
Publication Chairman—Mrs. Custis L. Coleman, Richmond
Directors—Mrs. J. R. St. George, Portsmouth
Mrs. Lee S. Liggan, Irvington
Mrs. Maynard Emlaw, Richmond

Richmond.

In December, the gavel was silent and all business was laid aside as Auxiliary members met for our annual Christmas party, held this year at the home of Mrs. William T. Moore. The oustanding decorations, under the supervision of Mrs. F. Elliott Oglesby, and Richmond's big snow of the same date combined to set the mood for the Christmas season. Toys were collected for distribution to the City Welfare Department.

Our January meeting was held in Windsor Farms at the beautiful new Headquarters Building of The Medical Society of Virginia. All of us who had not already been there were eager to see the new building, and we heard many compliments on the lovely bright decorating.

Our special guests were Mrs. Charles A. Easley, Jr., State President, and Mrs. Walter A. Porter, President-Elect. Mrs. Easley reviewed for us the highlights of her trip to the A.M.A. Auxiliary meeting, where medical legislation before Congress, highway safety, and the importance of AMEF were emphasized.

The final figure of our Auxiliary's contribution to Sheltering Arms Hospital has reached $2,573.20. The Auxiliary expressed special thanks to Mrs. Isadore Zfass for her splendid work on the house tour by which this money was raised. In addition, approximately $8000.00 worth of drugs have been collected since June for donation to Sheltering Arms.

Mrs. J. Henry Hawkins

Northampton-Accomac.

The Auxiliary to the Northampton-Accomac Medical Society held its first meeting of the year on January 13th at the home of Mrs. J. Fred Edmonds, Accomac, with nineteen members and one guest present. Mrs. Raymond G. Brown, president, presided.

The sum of twenty-five dollars was given to the Leigh-Hodges-Wright Memorial Fund as part of Doctor's Day observance. Donations were also given to various funds for each county and to the Student Loan Fund. Plans for the observance of Doctor's Day, to be held at the home of Dr. and Mrs. H. L. Denoon, Jr., on April 4th, were discussed.

Catherine Trower (Mrs. Holland)
Chairman, Press and Publicity

No Margin for Error

The American Medical Association and the American Hospital Association released on February 4 a new film on hospitals and the law. The film, No Margin for Error, was previewed by presidents and executives of allied hospital associations meeting at the midyear conference of the American Hospital Association.

No Margin for Error is one in a series of medicolegal films produced by The Wm. S. Merrell Company, pharmaceutical manufacturers. It presents one of the most pressing current problems in legal medicine, the cause and effect of human mistakes in the complex system of the modern hospital. Skillfully and candidly, case histories deal with major causes of in-hospital professional liability action.

Mix-up in patient identification, mistakes in blood bank procedure, and error in medication dosage are examples of problems the film reveals. It reports, based upon a recent study, that 45% of all medication errors occur as a result of mistakes in patient identification.

The importance of the operating room sponge count procedure is demonstrated. One sees how 60-90 seconds can often make the difference between a correct count or a mistake and possibly legal action.

No Margin for Error points the way for active, thoughtful cooperation between medical and administrative staffs of the hospital. Through this film the A.M.A. and A.H.A. show how a large number of incidents caused by human error can be effectively reduced.

No Margin for Error is a 16 mm. black and white optical sound film, running time, 30 minutes. Prints are available for loan from The Wm. S. Merrell Company, Cincinnati 15, Ohio, the American Medical Association or the American Hospital Association.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Clinical Obstetrics and Gynecology. Volume 1, Number 2. Toxemias of Pregnancy. Edited by Louis M. Hellman, M. D. Fibromyomas of the Uterus. Edited by Robert A. Kimbrough, M. D. A Quarterly Book Series. Paul B. Hoeber, Inc., New York. 1958. 250 pages. Price

Therapeutic Exercise. Edited by Sidney Licht, M. D., Honorary Member, British Association of Physical Medicine; etc. Third Volume of Physical Medicine Library. Elizabeth Licht, Publisher, New Haven, Conn. 1958. xiv-893 pages. Illustrated. Price $16.00.

Negroes and Medicine. By DIETRICH C. REITZES. Published for The Commonwealth Fund by Harvard University Press, Cambridge, Mass. 1958. xxxi-400 pages. Price $7.00.

Cold Injury, Ground Type. Medical Department, United States Army. By COLONEL TOM F. WHAYNE, MC., USA (Ret.), Professor of Preventive Medicine, School of Medicine, University of Pennsylvania; and MICHAEL E. DeBAKEY, M. D., Professor of Surgery and Chairman of the Department, Baylor University College of Medicine, Houston, Tex. Prepared under the direction of Major General S. B. Hays, The Surgeon General. United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., MC.; Associate Editor, Elizabeth M. McFetridge, M. A. xxi-570 pages. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $6.25.

Hormone Production in Endocrine Tumours. Ciba Foundation Colloquia on Endocrinology. Volume 12. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Maeve O'Connor, B.A. Little, Brown and Company, Boston. 1958. xii-351 pages. With 58 Illustrations. Price $9.00.

Epilepsy. By MANFRED SAKEL, M.D. With a Preface by Otto Poetzl, Professor Emeritus University and Clinic of Vienna. Philosophical Library, New York. 1958 xxxvi-204 pages. Price $5.00.

Neurological Basis of Behavior. Ciba Foundation Symposium. In Commemoration of Sir Charles Sherrington, O.M., G.B.E., F.R.S., 1857-1952. Editors for the Ciba Foundation G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Celcilia M. O'Connors, B.Sc. Little, Brown and Company, Boston. 1958. xii-400 pages. With 109 illustrations. Price $9.00.

Clinical Obstetrics and Gynecology. Volume 1, Number 3. Symposium on Abnormal Uterine Bleeding. Edited by John I. Brewer, M.D. A Quarterly Book Series. Paul B. Hoeber, Inc., New York. 1958.

Water and Electrolyte Metabolism in Relation to Age and Sex. Ciba Foundation Colloquia on Ageing. Volume 4. Editors for the Ciba Foundation G. E. W. Wolstenholme, O.B.E., M.A., B.Ch., and Maeve O'Connor, B.A. Little, Brown and Company, Boston. 1958. xii-327 pages. With 85 illustrations. Price $8.50.

What We Do Know About Heart Attacks. By JOHN W. GOFMAN, M.D., Professor of Medical Physics, University of California, Berkeley. G. P. Putnam's Sons, New York. 1958. xi-180 pages. Price $3.50.

Schizophrenia. By MANFRED SAKEL, M.D. With a foreword by Professor Hans Hoff, Head Department of Neurology and Psychiatry, University of Vienna. Philosophical Library, New York. 1958. vii-335 pages. Price $5.00.

Emergency War Surgery. U. S. Armed Forces Issue of NATO Handbook Prepared for Use by the Medical Services of NATO Nations. United States Department of Defense. xi-411 pages. Illustrated. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $2.25.

The Doctor Business. By RICHARD CARTER. Doubleday & Company, Inc., Garden City, N. Y. 1958. 283 pages. Price $4.00.

Men, Molds, and History. By FELIX MARTI-IBANEZ, M.D., Professor and Director of the Department of the History of Medicine, New York Medical College; Flower and Fifth Avenue Hospitals, New York; and Editor-in-Chief of MD Medical News magazine. MD Publications, Inc., New York. 1958. 114 pages. Cloth. Price $3.00.

The Birth of Normal Babies. By LYON P. STREAN, M.Sc., Ph.D., D.D.S., F.A.P.H.A., Consultant, Norristown State Hospital and Montgomery Hospital, Norristown, Pa. Twayne Publishers, New York. 1958. 194 pages. Cloth. Price $3.95.

Fracture Surgery. A Textbook of Common Fractures. By HENRY MILCH, M.D., Emeritus Attending and Consulting Orthopedic Surgeon, Hospital for Joint Diseases, New York. And ROBERT AUSTIN MILCH, M.D., Assistant Resident Surgeon, Peter Bent Brigham Hospital, Boston. With a Chapter on Anesthesia by Herbert D. Dubovsky, M.D., Director of Anesthesiology, Easton Hospital, Easton, Pennsylvania. A Hoeber Harper Book. Paul B. Hoeber, Inc., New York. 1959. x-470 pages. With 671 illustrations. Cloth. Price $17.50.

Editorial . . . .

Physicians in Politics

THE JANUARY ISSUE of *The New Medical Materia* lists the number of physicians serving in the legislatures of 20 states. Conditioned as we are in Virginia to the frequent election of physicians to public office, it comes as a surprise to learn that less than half of the states have physicians in their current legislatures. Even more remarkable is the fact that Virginia, with six doctors serving in The General Assembly, leads all other states in number and our representatives constitute more than one-sixth of all state legislators in the United States. This means we have eight times our share,

Politically minded physicians appear to be a Southern specialty, for no less than 24 of the 35 physicians live south of the Mason and Dixon line. Tennessee and North Carolina have three physicians each while the State of New York and all of New England cannot boast a single medical legislator. It is true that Pennsylvania has two physicians at Harrisburg but Ohio, Illinois and California combined can muster only one medical lawmaker.

If there is a ready explanation for this curious situation it does not come to mind immediately. It may mean that Southerners like their physicians and show their affection and confidence in them by electing them to public office. Northerners on the other hand are probably more prone to be impressed by outward evidence of material success and this in turn may prompt them to vote for business men and lawyers. A second and possibly more valid reason is that politics, as practiced in the North, may have less appeal to the physician than it has in the South.

Be that as it may, it is a healthy situation to have medical representation in lawmaking circles. Public health measures may be dealt with more intelligently and medical school appropriations may be approached more factually if physicians participate in the debate. The physician's greatest contribution, however, may lie in his understanding of human nature and an ability to translate this into constructive legislation.

H.J.W.

An A.M.A. Service

IN THE MAZE of medical literature the special reports of the various councils of the American Medical Association stand out as authoritative statements of present day medical thought. The reports are prepared deliberately and represent a consensus of informed medical opinion.

Two such reports on diverse subjects have been published this year and might be cited as worthwhile.

The Council on Food and Nutrition authorized the publication of a special report on Vitamin Preparations. The distinction was made between the Minimum Daily Requirements of Nutrients and the Recommended Dietary Allowances, the former being the amount necessary to prevent symptoms of deficiency and the latter being the amount of nutrients that will maintain good nutrition. There is a discussion of the use of vitamins as dietary supplements, with a listing of the specific and comparatively few instances where this use is indicated. Vitamins as therapeutic agents are briefly reviewed with emphasis on the point that the decision to employ vitamin preparations in therapeutic amounts clearly rests with the physician. Appropriate mention is made of the potential toxicity of vitamins A and D. The report does not list the amount of money spent annually by the American people but its final sentence wisely reads, "It is sound judgment to emphasize repeatedly that properly selected diets are the primary basis for good nutrition."

Another significant report is that of the Commission on Medical Care Plans published in a Special Edition of the Journal of the American Medical Association on January 17, 1959. This is a 97 page statement compiled under the chairmanship of Dr. Leonard Larson after a 3 1/2 year study by outstanding authorities. The work was divided between three committees. The first considered a group of miscellaneous and unclassified plans, the largest of which was that of the United Mine Workers. The second committee reviewed Blue Shield and private insurance programs and the third industry programs, including Workmen's Compensation. The report contains a wealth of factual material regarding the operation of these plans. Of particular interest to physicians is the discussion of the effect of these plans on the quality of medical care, on the physician-patient relationship, on the preservation of free choice of physicians, on the cost of medical care and on medical ethics in general. As Dr. Larson points out in his preface, the report recommends possible solutions to perplexing problems and also raises questions which are yet to be answered.

ENNION S. WILLIAMS, M.D.

Society Activities . . . .

Annual Spring Clinic.

The Norfolk County Medical Society will hold its Annual Spring Clinic on March 21st at the Center Theatre, Norfolk.

The program will be: Endocrine Aspects of Abnormal Uterine Bleeding by Dr. Georgeanna Seegar Jones, Assistant Professor, Department of Gynecology, Johns Hopkins University and Hospital; Diagnosis and Treatment of Renal Hypertension by Dr. Eugene F. Poutasse, Staff Urologist, Cleveland Clinic Foundation and Frank E. Bunts Institute; Report on a Trip to Russia by Dr. Mark M. Ravitch, Associate Professor of Surgery, Johns Hopkins University School of Medicine, Surgeon to the Johns Hopkins Hospital, and Surgeon-in-Chief at the Baltimore City Hospitals; Current Concepts of the Etiology and Pathogenesis of Cancer by Dr. David E. Smith, Professor of Pathology, University of Virginia; Some Aspects of the Chemotherapy of Lymphoma by Dr. Byrd S. Leavell, Professor of Internal Medicine, University of Virginia; Surgical Treatment of Metastatic Cancer by Dr. Lemuel Bowden, Assistant Attending Surgeon, Gastric and Mixed Tumor Services, Memorial Hospital, New York City; and Radioisotopes in Clinical Medicine by Dr. Richard H. Chamberlain, Professor of Radiology, University of Pennsylvania School of Medicine and Graduate School of Medicine.

Northern Virginia Medical Council.

At a recent meeting the Council, representing Northern Virginia doctors who are members of the Alexandria, Arlington and Fairfax Medical Societies, elected Dr. Thomas E. Haggerty, Falls Church, as president Dr. James Moss, Alexandria, vice-president; Dr. Carl Parker, Falls Church, secretary; and Dr. Robert Norment, Arlington, treasurer.

Northampton County Medical Society.

At a meeting of this Society on January 29th, Dr. John R. Mapp, Nassawadox, was elected president; Dr. Joseph E. Gladstone, Jr., Exmore, vice-president; and Dr. William F. Bernart, Nassawadox, secretary-treasurer. Dr. William J. Sturgis, Jr., was named a member of the Board of Censors of the Society; and Dr. Sturgis, Sr., representative to the Board of Trustees of the Northampton-Accomack Memorial Hospital.

Dr. Lewis Gillespie of the National Heart Institute at Bethesda, was guest speaker. He outlined a recent advance in the treatment of hypertension and discussed some of the biochemical aspects of the action of this new drug.

The Mid-Tidewater Medical Society.

Held its regular quarterly meeting at West Point on January 27th. The president, Dr. Harold W. Felton, presided. The following program was presented: The Medical Management of Pulmonary Infections by Dr. John Guerrant; The Surgical Management of Pulmonary Infections by Dr. George Minor; Dysphagia by Dr. James C. Respess; The Surgical Management of Dysphagia by Dr. Minor; Office Examination for Cancer Cells by Dr. Clifford Fox. All speakers are from the Medical School of the University of Virginia.

Southwestern Virginia Medical Society.

The spring semi-annual meeting of this Society will be held in Marion on April 16th.

Petersburg Medical Faculty.

Dr. Milton Ende has been elected president of the Faculty, with Dr. Kirby T. Hart as vice-president and Dr. Alvin Cohen, secretary-treasurer.

The Tri-State Medical Association

Will hold its annual meeting in Winston-Salem, North Carolina, at the Robert E. Lee Hotel, March 16-17. There will be panels on Gastroenterology, Dermatology, Psychiatry, Cardiology and Trauma. Individual papers will be on Urology, Infertility, Hypnosis in Pregnancy and Radiation Hazards. All physicians are invited to attend this meeting.

Dr. William R. Jordan, Richmond, is president, and Dr. R. B. Davis, Greensboro, North Carolina, secretary-treasurer.

News . .

New Members.

Since the list published in the February issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Thomas Rector Bass, M.D., Tazewell
Charles Patterson Cardwell, III, M.D., Richmond
Enda Anthony Coogan, M.D., Annandale
Eugene Micheaux Evans, Jr., M.D., Danville
William Noel Gordge, M.D., Roanoke
Panos George Gregoriou, M.D., Clintwood
Luther J. Hamlett, M.D., Roanoke
Donald Thomas Hensley, M.D., Vienna
Dietrich Walter Heyder, M.D., Norfolk
Cecil Hougie, M.D., Charlottesville
Francis Joseph Januszeski, M.D., Richmond
Frank Mitchell Johnson, M.D., Roanoke
Harry Isaac Johnson, Jr., M.D., Roanoke
Harold M. Johnson, M.D., Falls Church
William Ellis Josey, M.D., Norfolk
Edward Francis Patrick Kearney, M.D., Mathews
Charles Bennett Marshall, M.D., Martinsville
James Hawver McVey, M.D., Richlands
John Henry Moling, III, M.D., Winchester
Leslie Lawrence Peters, M.D., Arlington
Herman Howard Pinkerton, Jr., M.D., Abingdon
Walton Eugene Stevens, M.D., Charlottesville
Anton Strohhofer, M.D., Richmond
John David Varner, M.D., Roanoke
Joseph M. Vilallonga, M.D., Falls Church
William Rice Warren, M.D., Orange
Herbert L. Weinberg, M.D., Suffolk
William Franklin Weller, M.D., Roanoke
Francis Edward Winslow, Jr., M.D., Va. Beach

Dr. William H. Barney,

Lynchburg, has been named "Outstanding Young Man" of the year by the Junior Chamber of Commerce. He is the eleventh recipient of the annual distinguished service award and the first physician to be so honored.

Dr. Clifford G. Gaddy

Has been named Danville's outstanding young man for 1958 by the Junior Chamber of Commerce. The honor was presented to him as "a father of six, a lay preacher, a skilled physician and the president of the Danville Little League Baseball Association".

Dr. Robert D. Shreve,

Altavista, has been named the third annual "Man of the Year" for outstanding service to the community. The award was presented at the annual banquet of the Altavista Chamber of Commerce.

Medical Cruise to the Caribbean.

The Duke University Medical Center will have its Fourth Medical Cruise to the Caribbean, sailing from New York on April 2nd and returning April 14th, and sailing from Wilmington, North Carolina on the 3rd, returning on the 13th.

Those interested should contact the Director of Postgraduate Medical Education, Duke University Medical Center, Durham.

Dr. Bohannon Honored.

Dr. Alvah P. Bohannon, dean of Halifax County physicians, was honored guest of the Ruritan Club at its meeting in January. He has been practicing in Halifax for more than fifty-two years and has his office in Virgilina. Dr. Bohannon recalled that when he first saw Virgilina, it was a roaring mining town. Gold has been found in the surrounding countryside and miners from all over the country poured in. There was a bar on virtually every corner and the street resembled those of the traditional Wild West town.

Evening Medical Lecture Program.

The spring programs of the Evening Medical Lecture Series and the Research Society of the University of Virginia, School of Medicine, are held in the auditorium of the medical school and, with the exception of the meeting on March 24th, all will be presented at 8:00 P.M. All physicians are cordially invited to attend any or all of these presentations.

The programs started on February 2nd, and those scheduled for March are: March 16—The Development and Application of Anticonvulsant Drugs by Dr. H. Houston Merritt, Acting Dean and Professor of Neurology, College of Physicians and Surgeons, Columbia University and Director, The Neurological Institute, Presbyterian Hospital, New York.

March 23—The Staige Davis Blackford Memorial Lectureship—The Effect of Adrenergic Amines on the Cardiovascular System by Dr. Daniel T. Watts, Chairman, Department of Pharmacology, University of West Virginia Medical School, Morgantown.

March 24 (4:00 P.M.)—The Squibb Centennial Lecture—The Function of Coenzyme A in Fat and Lipid Metabolism by Dr. Feodor Lynen, Director, The Max Planck Institute for Cell Chemistry, Munich, Germany.

April 6—The Phi Chi Lectureship—Subject to be announced by Dr. H. William Scott, Jr., Chairman, Department of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee.

April 13—Clinical and Experimental Observations on the Cortisones by Dr. Philip S. Hench, The Mayo Clinic, Rochester, Minnesota.

The programs by the Research Society of Virginia are:

March 9—Phenol Sensitive DPNH Oxidase in Rat Uterine Homogenates by Miss Mary Louise Stephens; The Effect of Specific Antibody Upon the Course of Herpes Simplex Infections in Tissue Culture by Dr. Clayton E. Wheeler, Jr.; and Experimental Production of Dissecting Aneurysms of the Aorta by Drs. Frank S. Blanton, Jr., William H. Muller, Jr., and W. Dean Warren.

April 20—Serum Cholesterol Studies in Healthy Individuals—Dr. Fred D. Robinson and Amory M. Sommaripa; Re-Evaluation of the Hemodynamics of Cirrhosis and Portal Hypertension by Drs. W. Dean Warren and William H. Muller, Jr.; and Total Circulating Sodium and Hyponatremia by Frank J. Borsody, Drs. Nuzhet Atuk, Julian R. Beckwith, and J. Edwin Wood, Jr.

Dr. D. W. Scott, Jr.,

Has been installed as president of the Fredericksburg Kiwanis Club. Dr. T. Stacy Lloyd is a director of the Club.

The Arlington County Health Department,

Of which Dr. Ralph G. Beachley is the Director, has again been approved by the Council on Medical Education and Hospitals of the American Medical Association for an additional two years of residency training in public health. This department is one of thirty-nine in the nation which is so designated and provides training for medical health officers wishing to enter the field of public health and qualify for the American Board of Preventive Medicine and Public Health.

Virginia Trudeau Society.

Respiratory diseases, including lung cancer, unusual forms of pneumonia, and tuberculosis in children, will be discussed at the annual meeting of the Virginia Trudeau Society. The meeting will open at 2:00 P.M., April 8, in the Hotel Jefferson in Richmond.

Topics will reflect the recent decision by the National Tuberculosis Association and the American Trudeau Society to adopt the entire field of respiratory disease for expanded activity. While the NTA retains the eradication of tuberculosis as the objective of first importance, acute respiratory infections will claim attention of TB associations in those areas where the tuberculosis problem does not warrant the full-time effort of a vigorous voluntary agency program.

Selected for the VTS program to speak on "The Present Status of Cytologic Diagnosis of Lung Cancer" is Dr. Leopold Koss, Director of Cytology and Associate Pathologist at Memorial Hospital in New York City, and Associate Professor of Pathology, Sloan-Kettering Division, Cornell University Medical School.

Dr. Oscar Auerbach, Chief of Laboratory Services, Veterans Administration Hospital, East Orange, New Jersey, will speak on "Carcinoma-in-Situ and Its Significant Changes."

Dr. Sydney Jacobs, physician of New Orleans and President-Elect of the Southern TB Conference, is to discuss "Unusual Forms of Pneumonia and Diagnosis and Treatment Thereof."

Dr. Edwin L. Kendig, Richmond pediatrician and director of the Child Chest Clinic at Medical College of Virginia, will present, "Tuberculosis in Children Contracted from Mothers with 'Arrested' TB."

The medical session will be followed by a social hour and dinner at which Dr. Daniel Jenkins, President of the American Trudeau Society and Professor of Medicine, Baylor University, Texas, will give the keynote address.

All physicians—general practitioners, chest specialists, internal medicine, and others—are invited to attend the meeting. They need not be members of the Trudeau Society. Reservations should be made directly with the hotel.

Staff Appointments.

Dr. James H. Powell has been elected chairman of the Medical Staff of the Petersburg General Hospital, succeeding Dr. Julius H. Hopkins. Vice chairman is Dr. Munford R. Yates and secretary is Dr. David B. Drewry, with Dr. Alvin Cohen as alternate secretary. Chiefs of sections are Dr. James D. Mason with Dr. William S. Sloan as alternate, internal medicine; Dr. Herman W. Farber, pediatrics; Dr. James A. Thweatt, general practice; Dr. Clyde W. Vicks, Jr., general surgery; Dr. Francis R. Payne,

Jr., obstetrics; Dr. Hopkins, surgical specialties; and Dr. Simon Russi, diagnostic service.

Dr. George H. Smith has been elected president of the Medical Staff of Winchester Memorial Hospital with Dr. Frank E. Tappan vice-president; Dr. Robert S. Boyd secretary; and Dr. M. D. Custer, Jr., treasurer.

Dr. Fred C. McCall has been elected chief of the medical staff at Bristol Memorial Hospital, succeeding Dr. William Credle. Dr. Talmadge Buchanan is vice chief; Dr. Russell Frankhouser, secretary-treasurer; Dr. Frank Sutterlin, chief of surgery; Dr. Joe Mitchell, chief of obstetrics and pediatrics; and Dr. Fred Vance, Jr., chief of medicine.

Child Psychiatry and Neurology Lectures.

A series of lectures are being held at the Lynchburg Training School and Hospital in the fields of child psychiatry and child neurology by professors in residence at the School and Hospital. Lectures began in January, and subsequent speakers and lecture dates are as follows:

May 28-30—Child Psychiatry by Dr. Wilfred C. Hulse, New York City.

July 30-August 1—Child Neurology by Drs. Walter O. Klingman, The Titus Harris Clinic, Professor of Psychiatry and Neurology, The University of Texas, Galveston.

September 24-26—Child Psychiatry by Dr. Frederick H. Allen, Professor of Psychiatry, University of Pennsylvania Medical School, Philadelphia.

October 29-31—Child Neurology by Dr. Sidney Carter, Associate Professor of Neurology, Columbia University, New York.

November 19-21—Child Neurology by Dr. Paul M. Ellwood, Jr., Director of Inpatient Service, Elizabeth Kenny Institute, Minneapolis.

All physicians are invited to attend these lectures which have been made possible by a grant from the Smith, Kline and French Foundation. Further information may be obtained from Dr. Benedict Nagler, Superintendent, Lynchburg Training School and Hospital, Colony, Virginia.

American Academy of General Practice.

The 11th Annual Scientific Assembly of the Academy will be held in San Francisco, April 6-9. The scientific program will feature 28 prominent physician authorities. More than 100 scientific and 300 technical exhibits will be prepared. All meetings will be held in the Civic Auditorium.

Dr. Holland T. Jackson, Fort Worth, Texas, is president of the Academy. Dr. Fount Richardson, Fayetteville, Arkansas, is president-elect and will take office at the San Francisco meeting.

Dr. C. L. Riley,

A member of the Board of Directors of the Commercial & Savings Bank, Winchester, during the past five years, was elected Chairman of the Board at the meeting of stockholders in January.

Post-Graduate Day.

The Roanoke Memorial Hospital will hold its tenth annual Post-Graduate Day program on March 19th at the Hotel Roanoke. The meeting is open to interested physicians and is approved for Category One credit by the American Academy of General Practice. The program begins at 2:00 P.M., and is as follows: Pyelonephritis and Hypertension in Pregnancy Masquerading as Toxemia by Dr. Frank Finnerty, Georgetown University Medical School; Transaminase and Other Serum Enzyme Tests in Clinical Medicine by Dr. Felix Wroblewski, Cornell University Medical School; Functional Gastro-Intestinal Disease by Dr. Dwight L. Wilbur, Stanford University Medical School; and Experience with Transplantation of the Human Kidney and Renal Hypertension by Dr. Hartwell Harrison, Harvard Medical School.

Eye Bank Research Laboratory.

The Elbyrne G. Gill Eye and Ear Foundation announces the establishment of a research laboratory in conjunction with the Eye Bank and Sight Conservation Society of Virginia. The laboratory is prepared to make the dye test for Toxoplasmosis.

International Academy of Proctology.

The Eleventh Annual Convention of the Academy will be held in New York, April 5-9.

There will be special emphasis on anal and rectal panel presentations and on newer treatment methods. Eminent speakers from all parts of the country and abroad will present papers and motion picture demonstrations of their personal technics.

Physicians and their wives are cordially invited to attend the convention, whether or not they are affiliated with the Academy. For further information, contact Dr. Alfred J. Cantor, Executive Secretary, 147-41 Sanford Avenue, Flushing 55, L. I., New York.

The Southwestern Society of Nuclear Medicine

Will hold its fourth annual meeting at the Roosevelt Hotel in New Orleans, March 14-15.

Current Currents

A MEDICOLEGAL CONFERENCE, sponsored by AMA, will be held in Washington at the Mayflower Hotel on March 20-21. The program will be of interest to both physicians and attorneys, and component societies might wish to send representatives. Among the subjects to be covered are: Medical and Legal Problems Involved in Narcotic Addiction, Traumatic Neurosis, The Approach of Medicine and the Law to Contingent Fees, Res Ipsa Loquitur in Professional Liability Cases, Impartial Medical Testimony, and The Classic Method of Cross Examining an Expert Medical Witness. The Conference begins with registration at 12:00 Noon on Friday and will be concluded by 4:30 P.M. on Saturday.

THE CIVILIAN PHASE OF MEDICARE, according to reports from Washington, will cost between $90 and $93.6 million for the current fiscal year ending June 30. This is $21 million more than Congress approved. It is further reported that the Army and Air Force are able to shift funds from other accounts to make up for their Medicare shortages. The Navy, however, will probably have to submit a deficiency appropriation for approximately $6 million. A request for $89 million has been made for next year.

SIMPLIFIED CLAIM FORMS are covered in a booklet which has been mailed to every member of The Medical Society of Virginia. The booklet was prepared by the Health Insurance Council and contains forms designed for all types of health and accident insurance policies. The forms are being used by many insurance companies throughout the United States.

A number of inquiries concerning simplified forms have been received in recent months, and it is hoped that this booklet will provide the answers.

STATEMENTS FOR 1959 AMA DUES have been mailed from the State Office. These statements should not be confused with those for State Society dues which were mailed during the first week of January. It might be well to mention that AMA dues should be paid by June 1.

THE SPECIAL EDITION of the Journal of the AMA, dated January 17, should be read carefully by all physicians. The special edition contains a report of the Commission on Medical Care Plans, which was appointed by the Board of Trustees of the AMA in 1954. The report concerns itself with medical care plans in existence throughout the United States and deals with three broad areas of research: (1) the nature and meth-

od of operation of the various types of plans through which persons receive the services of physicians; (2) the effect of these plans on the quality and quantity of medical care; and (3) the legal and ethical status of the arrangements used by these plans.

INTEREST IN CIVIL DEFENSE may be increasing. According to the Director of the Office of Civil and Defense Mobilization, Americans are not as apathetic about the dangers of thermonuclear attack as is commonly supposed. He stated that over thirty million requests have been received for cards listing five things that every citizen should know should an attack occur. It was also mentioned that forty million copies of a "Handbook for Emergencies" have been distributed by Boy Scouts. Those desiring copies may secure them from local civil defense offices or from the Washington, D.C., Headquarters of OCDM.

COST OF MEDICAL AND HOSPITAL CARE is well covered in an editorial from the Dallas Morning News. It admits that during the last twenty years physicians' fees have increased 84 per cent. However, an automobile that cost $1,000 in 1938 now costs $3,500. It also mentions that haircuts have gone up 205 per cent, movie admissions 120 per cent, and baby shoes 171. The editorial tells of a plumber's wife who was rushed to the hospital for an emergency appendectomy. The total bill came to $148. The plumber then figured that the hospital would have paid in excess of $148 if it had hired three sets of plumbers on eight hour schedules with overtime figured on a twenty-four hour basis. Brought out also is the fact that the biggest factor in the rise of hospital costs is labor. It states that in a hospital where the average daily cost per patient is $28.81, hospital personnel alone accounts for $22 of that amount.

THE KEOGH-SIMPSON BILL has been favorably approved by the House Ways and Means Committee and apparently is headed for early floor action. The bill, as reported out of committee, is identical with the version which passed the House last year but died in the Senate.

This bill would allow self-employed, including physicians, to set aside 10 per cent of gross adjusted income, up to $2,500, when paid into retirement plans. The maximum to be set aside in any lifetime would be $50,000. Leading the campaign for enactment is the American Thrift Assembly, of which the American Medical Association is a member. It is reported that the bill is gaining new supporters in the Senate and may be acted on in that body this session.

MEDICAL SCHOOLS are finding it increasingly difficult to attract and retain competent faculty because of a lack of adequate financial resources. It has been learned that all 82 schools are confronted with a most serious teacher shortage which, apparently, is increasing. A recent report from the National Fund for Medical Education indicates that in 1957 there existed 333 faculty vacancies and in 1958 this number had increased to 622. The schools need the help of every physician if they are to remain free from federal control. Contribute now to the AMEF.

Obituaries . . . .

Dr. Howard Russell Masters,

Prominent Richmond psychiatrist, died January 27th, at the age of sixty-four. He was a native of Fredericksburg and a graduate of the Medical College of Virginia in 1919. Dr. Masters was president of Tucker Hospital and associate professor of psychiatry and neurology at the Medical College of Virginia. He was a member of the Board of the Memorial Guidance Clinic and one of the organizers of the clinic. He had served as president of the clinic and also as acting director. Dr. Masters was appointed in 1953 to the college of electors for the Hall of Fame for Great Americans. He had been president of the Randolph-Macon Alumni Association and held an honorary LLD degree from the college.

Dr. Masters served in the medical reserve corps of the army in 1917-1919. He was a member of many professional organizations and had been a member of The Medical Society of Virginia for thirty-seven years.

His wife and four children survive him.

Dr. Sheppard Kellam Ames,

Councilor of The Medical Society of Virginia, died January 31st at his home in Cape Charles. He was sixty-three years of age and received his medical degree from the University of Virginia in 1925. Dr. Ames specialized in cardiology. He was with the Army in World War I, serving with Base Hospital 45. Dr. Ames was a charter member and first president of the Cape Charles Lions Club. He joined The Medical Society of Virginia in 1926, and was a member of the Council, representing the first district.

His wife, two sons and two daughters survive him.

Dr. William Harvey Whitmore,

Widely-known Norfolk physician, died January 30th. He was a native of Lynchburg and sixty-six years of age. Dr. Whitmore graduated in medicine from the University of Virginia in 1916 and had practiced radiology in Norfolk for the past twenty years. He served in the United States Naval Medical Corps and saw service in World Wars I and II, retiring as a Captain. Dr. Whitmore was a past president of the Radiological Society of Virginia and had been a member of The Medical Society of Virginia for twenty years.

His wife, two daughters and one son, Dr. W. H. Whitmore, Jr., survive him.

Dr. Mervin Wilbur Glover,

Alexandria, died January 9th, following a heart attack in his office. He was born in Sitka, Alaska, when his father was stationed there with the U. S. Public Health Service, and was fifty-one years of age. Dr. Glover graduated in medicine from the George Washington University in 1932. He served with the Army Air Corps during World War II and was promoted to the rank of major. He was a member of the Medical Society of Virginia.

He is survived by his wife and three daughters. Mrs. Glover is formerly a president of the Woman's Auxiliary to the Medical Society of Virginia.

Dr. Nicholas Flood Hix,

Prominent Wise County physician, died January 1st after a brief illness. He was eighty-two years of age and a graduate in medicine from the University of Virginia in 1900. Dr. Hix was recognized as the oldest active physician in Wise County where he had been practicing for nearly 58 years. He was not only active in the practice of his profession but was considered one of the most successful apple producers in Southwest Virginia. His orchards were started as a hobby more than fifty years ago and they now contain almost 10,000 trees. Dr. Hix was a member of The Medical Society of Virginia.

His wife and three daughters survive him.

Dr. Aaron W. Martin,

Hillsville, died August 30th. He was seventy-nine years of age. Dr. Martin was a Life Member of The Medical Society of Virginia, having joined in 1917.

Dr. Rawles.

On November 24, 1958, Dr. B. W. Rawles, Sr., died, age 88. He was next to the oldest member of the Academy and one of a dozen of the oldest graduates from the Medical College of Virginia.

Born in Nansemond County he received his education at the county schools, the Bethel Military Academy, and graduated from the Medical College of Virginia in 1897. After interning at the Old Dominion Hospital he began to practice in Richmond. Surviving him is his wife, four sons, one daughter and ten grandchildren. One of these sons, Benjamin Rawles, Jr., is a past president of this organization. He rapidly began to take his place in Richmond and was interested in many things. At the Medical College of Virginia he taught principles of surgery for many years. He was a communicant of St. Paul's Episcopal Church, a thirty-second degree Mason, and took his place in organized medicine We have many old men around on the retired list but Dr. Rawles practiced medicine up until a few weeks of his death.

Dr. Rawles was a type of a self reliant general practioner who approached his job with confidence and had good reason for that confidence. He was in no way a dilettante in what he attempted to do. Such a man loved humanity and combated its ills. He wanted to be the one to help. Obviously, if his interests were entirely in some specialized line that would deprive him of the opportunity of being near what ever would befall and to be needed was his desire. He could look any man in the eye and say "I am a physician, I may not know as much about surgery as my son but even there I know my way around. I am a practitioner of the Art of Medicine."

Times change and men change with them but knowing Dr. Rawles gave one an insight to a type that is fast vanishing. These men seem to guide themselves with the precept of "Hold fast to that which is good" and at the same time be always ready to accept a proven modern truth. They would then apply this truth to therapy. Research was not their field but it would probably be helpful to our conceit if we could compare the scientific technical success of our lives to the solid ethical attainments of theirs.

A man of this type was interested in everything and that carried him to the out-of-door and the fields and streams. It is often remarked how many of the true disciples of Aescalapius are fishermen.

When all the honors have been paid, can there be a higher epitaph than this? He loved the sick and the sick loved him.

Be It Therefore Resolved that this resolution be recorded in the minutes of the Richmond Academy of Medicine and that copies be sent to The Medical Society of Virginia and the family.

Arthur S. Brinkley, M.D.
Thomas W. Murrell, M.D.

Dr. Blanton.

Dr. Howson Wallace Blanton was born in Richmond, on February 9, 1892 and died in Richmond on December 12, 1958.

His mother, Elizabeth Wallace Blanton came from a distinguished Virginia family, and his father, Charles Armistead Blanton, of equally fine ancestry, distinguished himself as a leading practitioner of medicine in Richmond over a period of many years. These parents lived to rare old age and had the joy and satisfaction of observing the outstanding medical careers of their two sons.

Dr. Blanton attended the Glebe School in Richmond, and Hampden Sydney College, where he graduated with A.B. degree in 1912. While in school he was a member of the Convenantors, that fine boys organization of the Presbyterian Church, unfortunately now replaced by the multitudinous groups in the modern youth movement. He remained an earnest and devoted member of the First Presbyterian Church and was a Deacon for many years. In college, Dr. Blanton had a fine record as a student and leader. He was a halfback on the football team, and Captain his senior year, and was Captain of Hampden Sydney's second basketball team and an infielder on the baseball team. For the next year while teaching in the Armstrong High School of Richmond, he successfully coached the football team of John Marshall High School.

He studied medicine at the College of Physicians and Surgeons of Columbia University, where he graduated in 1917, after internship and residency at St. Luke's Hospital, New York City, he was associated with Dr. Blake at the American Ambulance Service in Paris during World War I, and was later a 1st Lieutenant in the U. S. Army Medical Corps.

He practiced internal medicine with his father and brother, Wyndham Bolling Blanton from 1918 to his death in 1958. He was an astute diagnostician, and an earnest, hard working doctor. The complete care of his patients was always his objective, this combined with his charming personality brought to him large numbers of people who were his patients and devoted friends. Dr. Blanton was interested in people and in helping them. One of his outstanding characteristics was the unhurried manner in which he displayed this interest and dispensed his aid. The result was a host of people made better by him, both physically and spiritually.

He was a member of the Richmond Academy of Medicine. The Medical Society of Virginia and the American Medical Association. He was Assistant Professor of Clinical Medicine at the Medical College of Virginia.

Socially he was a charming companion, he enjoyed golf, boating and fishing and was a member of the Commonwealth Club, Country Club of Virginia, Virginia Society of the Cincinnati and the Society of Colonial Wars.

He is survived by his wife, Janet Wicker Blanton who by training and interest shared his enthusiasm for medicine, and a daughter, Betty Blanton Cooke.

Those of us who were privileged to know him will feel a sense of gratitude for his friendship and of loss and grief at his death.

Therefore, Be It Resolved that the Richmond Academy of Medicine hereby expresses its sense of deep feeling of sorrow and regret at the passing of Dr. Blanton.

Be It Further Resolved that this resolution be spread upon the minutes of the Academy, a copy sent to his immediate family and one to the Journal of The Medical Society of Virginia.

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The next meeting of the Virginia Board of Medical Examiners will be held at the Richmond Hotel, Richmond, Virginia, June 17, 1959. The examinations will be held in the Gray's Armory, June 18-20, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 27, 1959. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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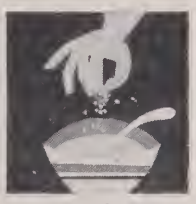
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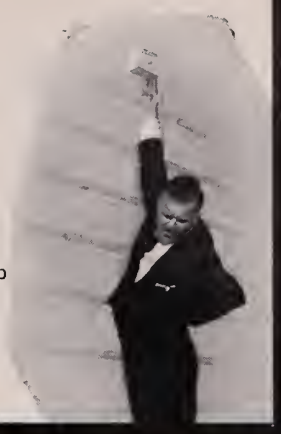
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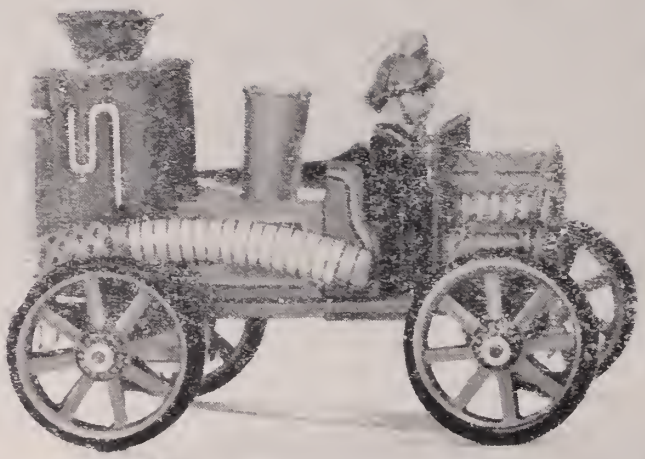
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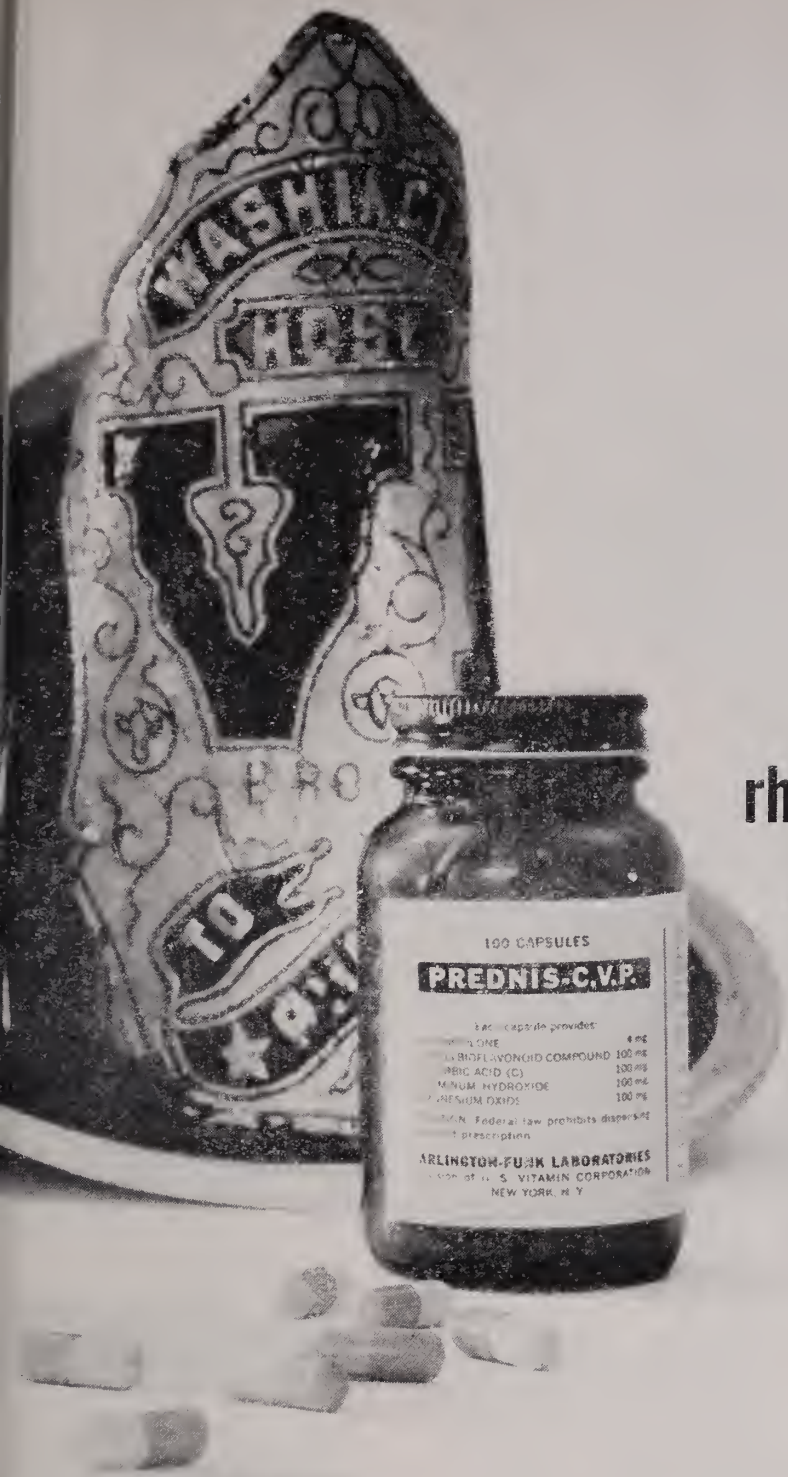
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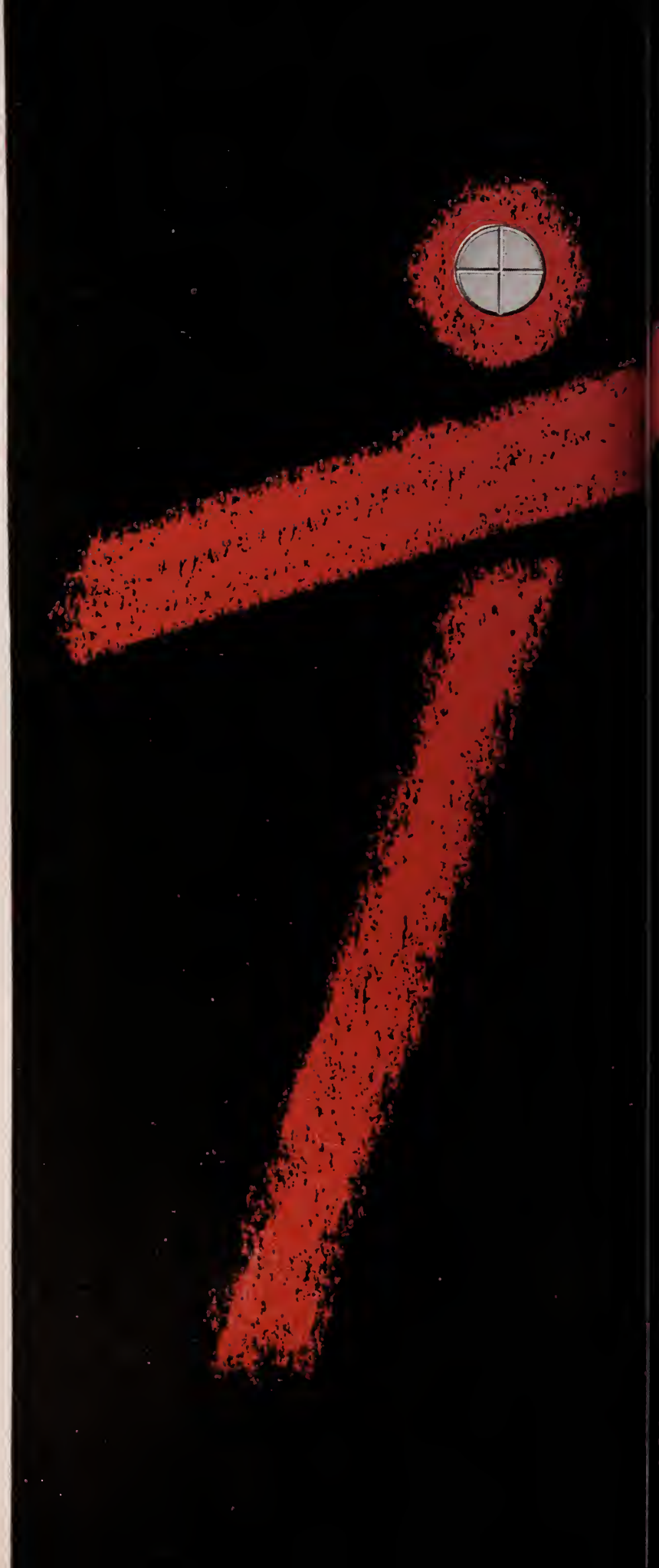
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1. Editorial, New England J. Med. 258:48, 1958.
2. Vinnicombe, J.: Antibiotic Med & Clin. Ther. 5:474, 1958.
3. Sheth, U. K., et al.: Ibid., p. 604, 1958.

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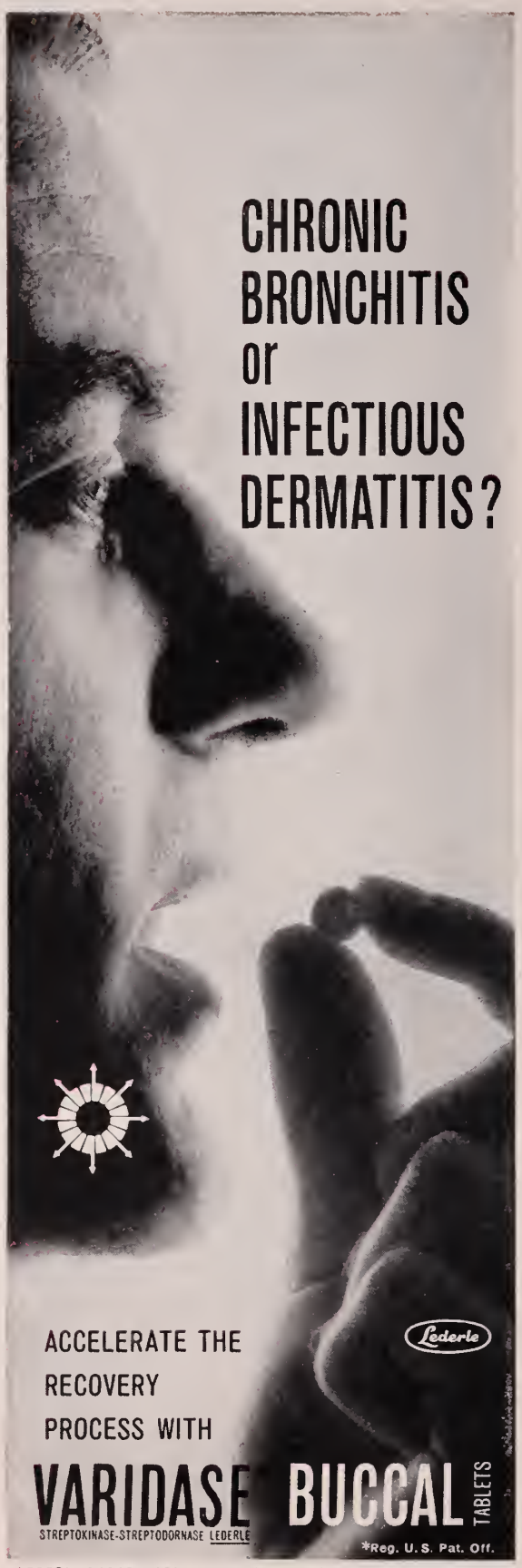
Tetracycline (tetracycline) equivalent to tetracycline hydrochloride . . . . . 125 mg.
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Potassium metaphosphate . . . . . 100 mg.

Dosage:

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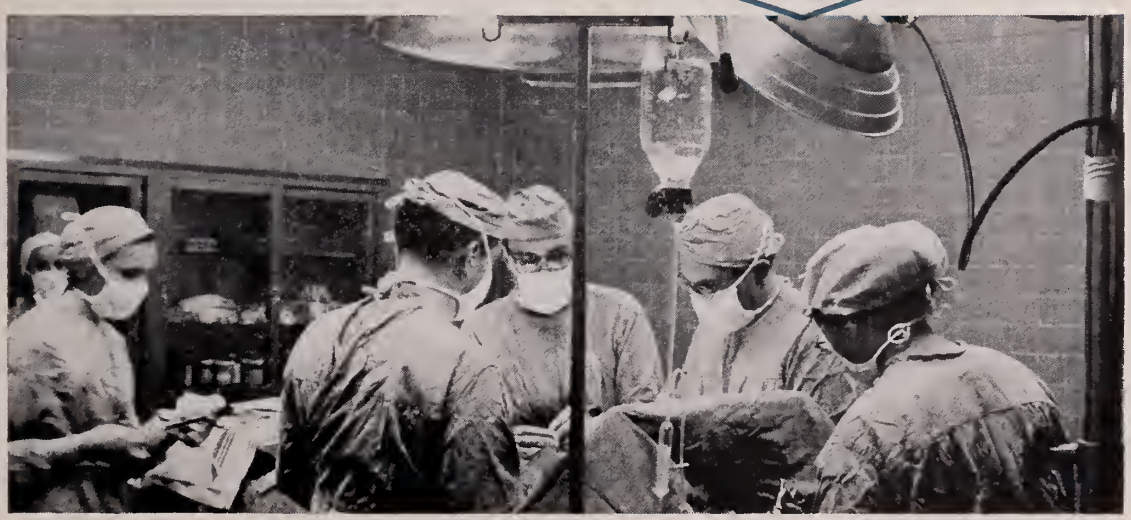
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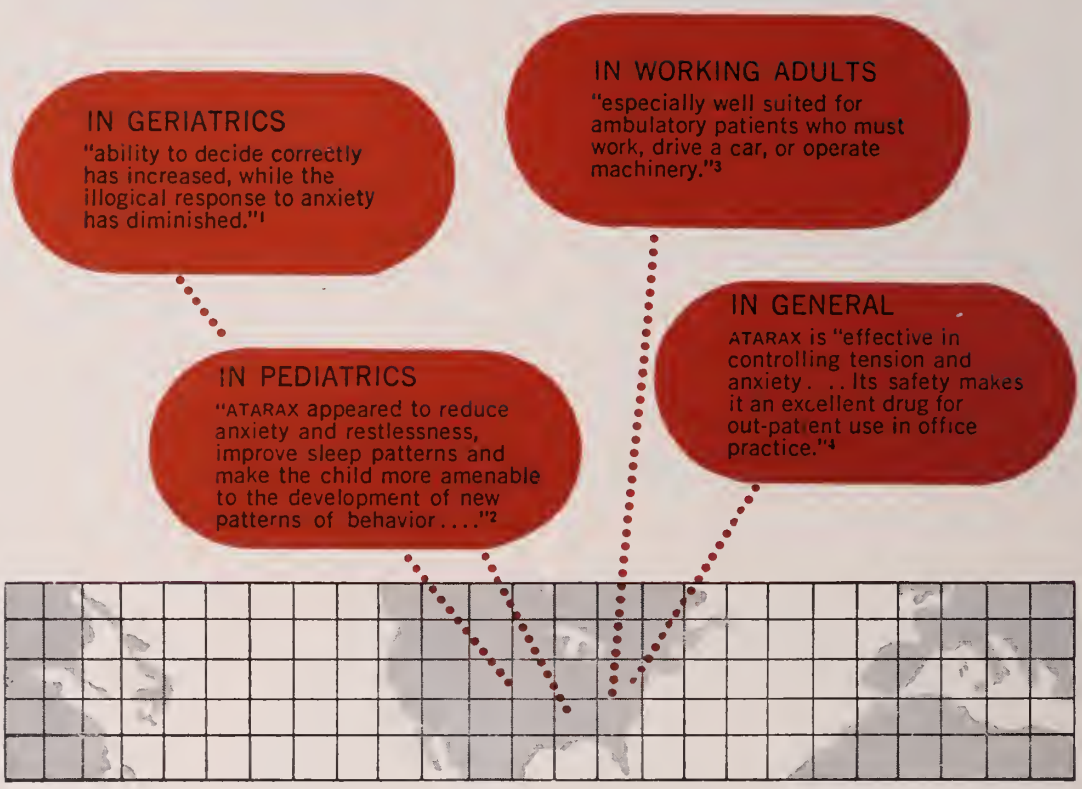
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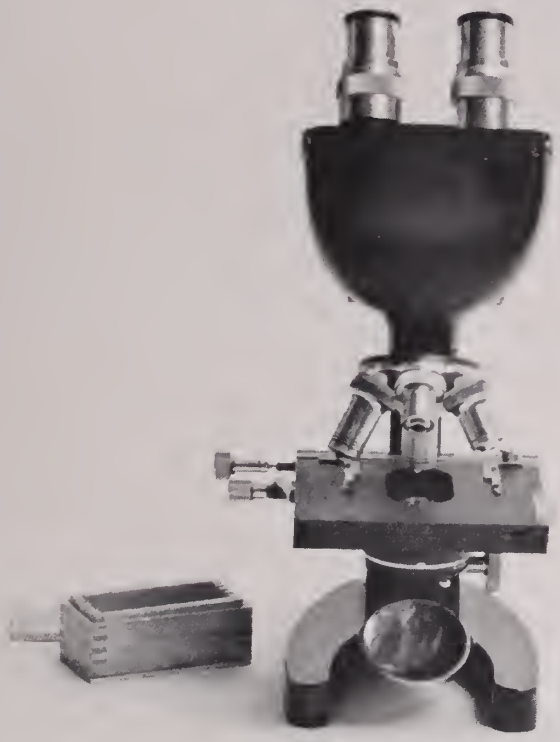
References: 1. Smigel, J. O., et al.: J. Am. Ger. Soc., in press. 2. Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958. 3. Ayd, F. J., Jr.: New York J. Med. 57:1742 (May 15) 1957. 4. Menger, H. C.: New York J. Med. 58:1684 (May 15) 1958. 5. Coirault, M., et al.: Presse méd. 64:2239 (Dec. 26) 1956. 6.Bayart, J.: Presented at the International Congress of Pediatrics, Copenhagen, Denmark, July 22-27, 1956.

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Provides fast, high blood and tissue concentrations—Because ERYTHROCIN Stearate is rapidly absorbed, patients get therapeutic blood and tissue levels within 30 minutes—and effective concentrations for at least six hours.

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1. Herrell, W. E., Hazards of Antibiotic Therapy, J.A.M.A., 168:1875, December 6, 1958.
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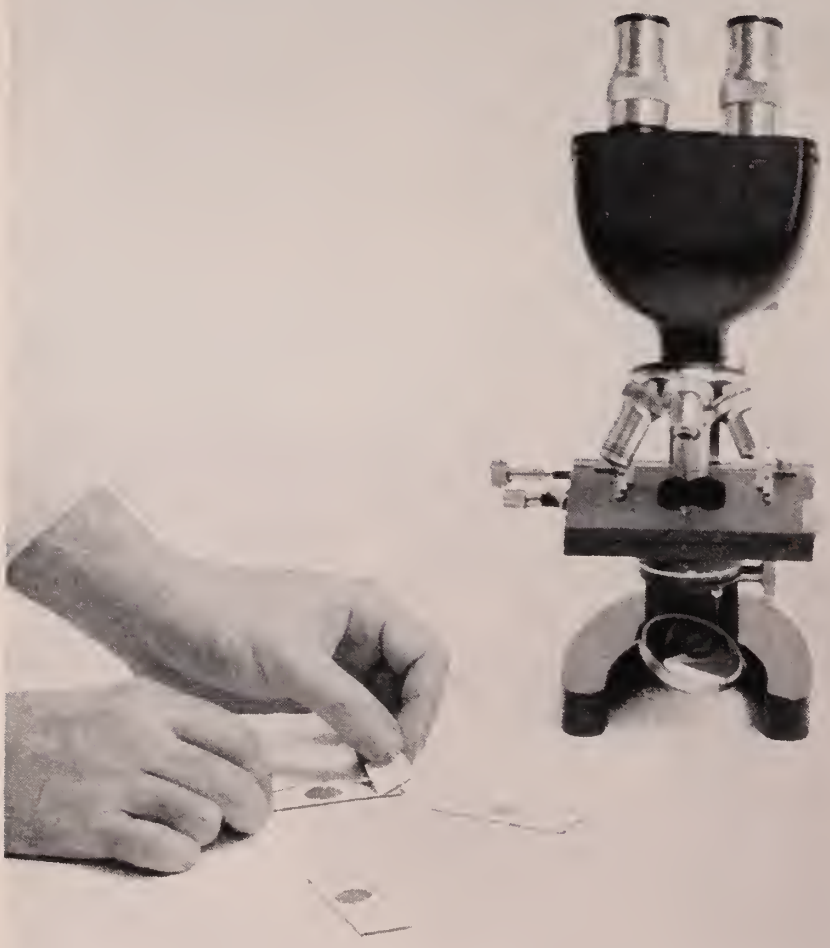
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an uncommon antibiotic

for common infections

for those penicillin-sensitive organisms



The Higher Blood Levels of Potassium Penicillin V

COMPOCILLIN-VK Indications—Against all organisms sensitive to oral penicillin therapy. For prophylaxis and treatment of complications in viral conditions. As a prophylaxis in rheumatic fever and in rheumatic heart disease.

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(Potassium Penicillin V)

in easy-to-swallow Filmtabs®

in tasty, cherry-flavored Oral Solution

against serious and resistant coccal infections



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The dramatic story of SPONTIN can never really begin to be told.

In little more than a year, this potent antibiotic has compiled an incredible record for saving lives —and often, after all other therapy had failed. Majority of successes involved patients critically ill with staphylococcal infections—conditions that had resisted all other known antibiotic therapy.

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1. Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 15, 16, 17, 1958.

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Prepared from pure crystals

Provides Outstanding Clinical Effectiveness Against Coccal Infections, Including Resistant Staphylococci and Enterococci[1]

Provides Bactericidal Action Against Coccal Infections[1]



running noses and open stuffed noses orally



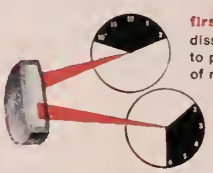
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safer and more effective than topical medication

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Phenylpropanolamine HCl . . .	50 mg.
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One-half of this formula is in the outer layer, the other half is in the core.

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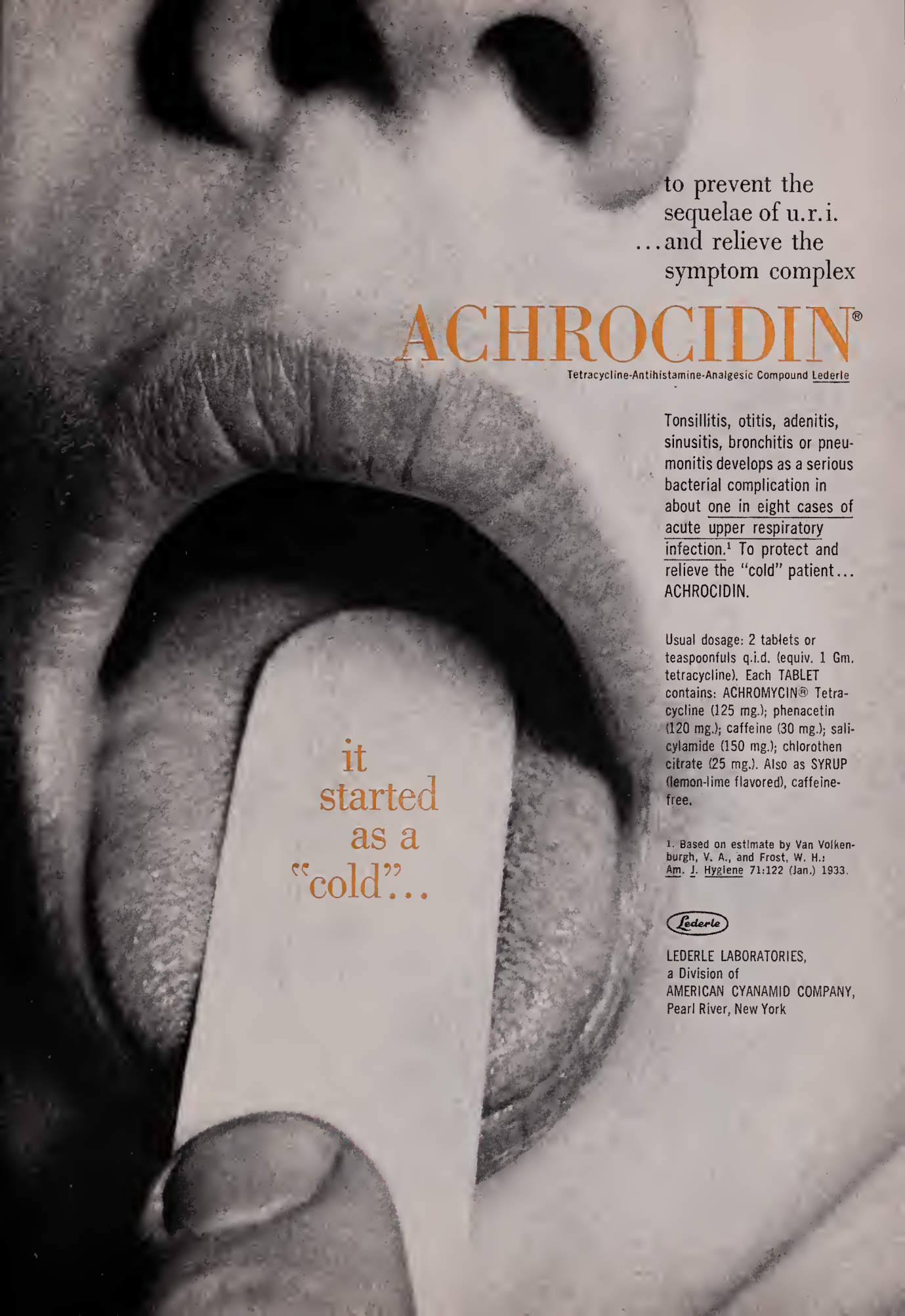
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1. Proctor, R. C.: Clin. Med. 6: 717 (June) 1957
2. Proctor, H. ., Bailey, W. H. and Morehouse, W. G.: J. Am. Geriatrics Soc. (April) 1958.



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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933.

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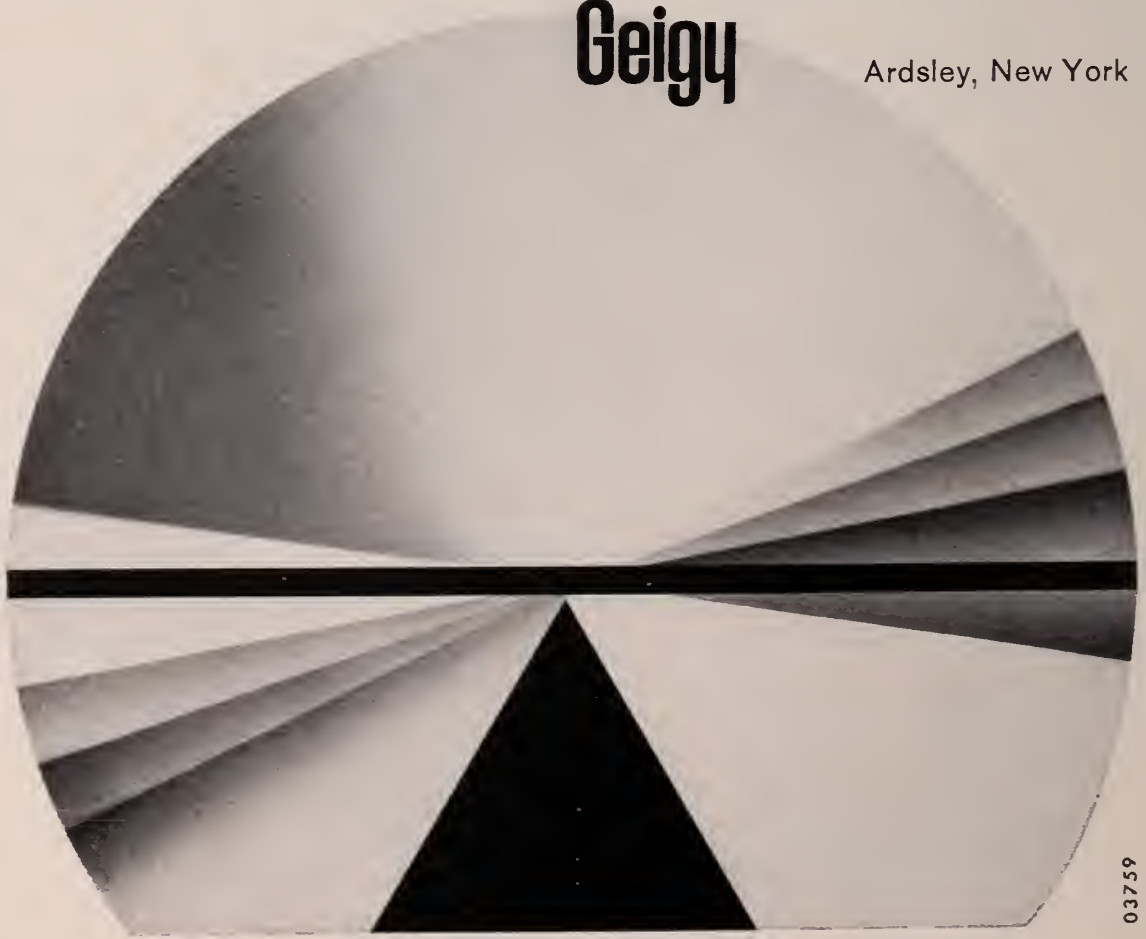
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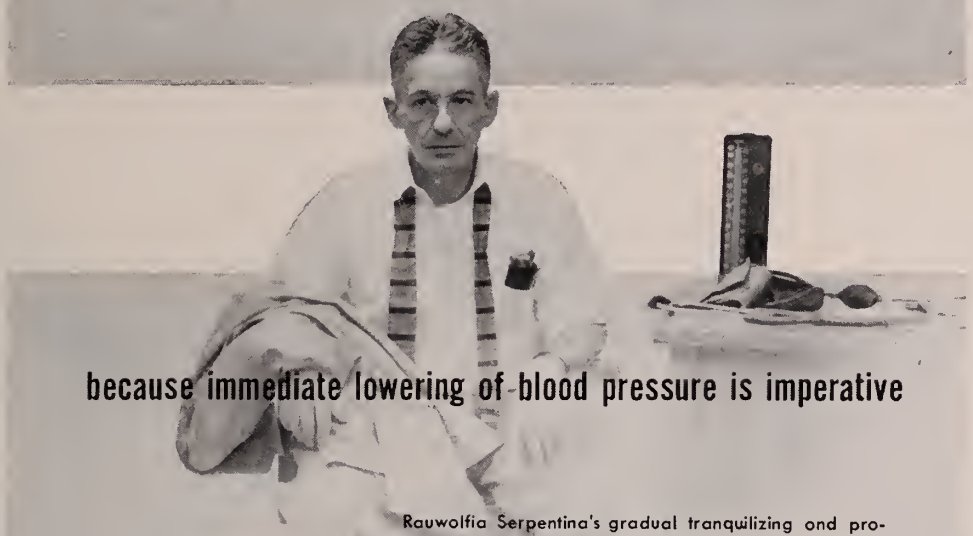


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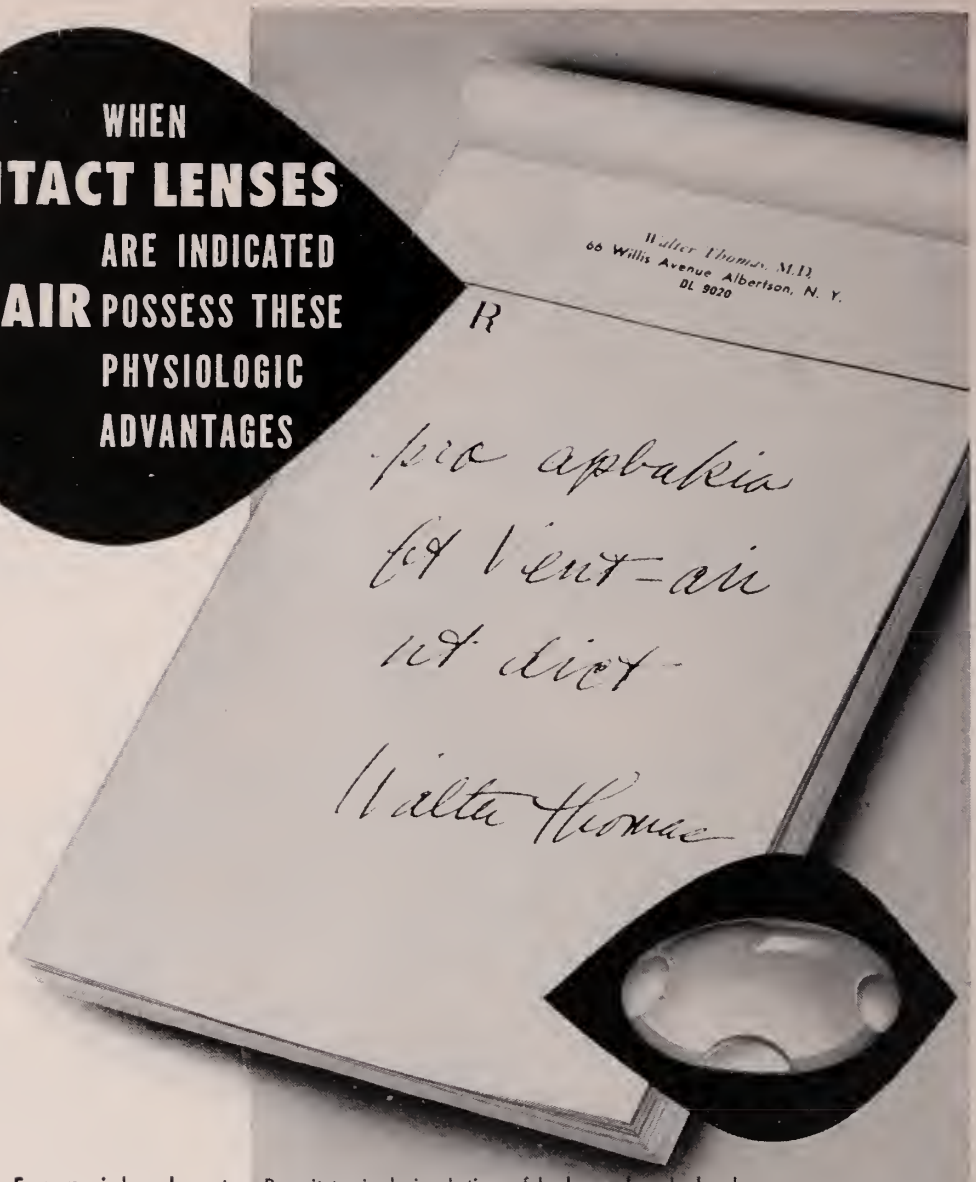
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(1) Rubin, A., and Babbott, D.: J.A.M.A. *168*:498, (Oct. 4) 1958. (2) Kinsey, A. C.; Pomeroy, W. B., and Martin, C. E.: Sexual Behavior in the Human Male, Philadelphia, W. B. Saunders Company, 1948.

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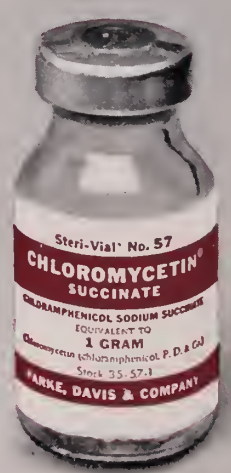
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Type of infection	Number of Patients	RESULTS Excellent to Good	Fair	Poor
Respiratory[3,4]*	32	32		
Shigella dysentery[2]	14	14		
Enteritis[3]	10	6	2	2
Bacteremia[3,5]	5	5		
Meningitis[3,5]	4	3		1**
Rocky Mountain spotted fever[3,5]	2	2		
Ear abscess with cellulitis[4]	1	1		
Lung abscess[4]	1			1
Typhoid fever[5]	1	1		
TOTALS	70	64	2	4

*Includes 15 patients who were administered CHLOROMYCETIN SUCCINATE by nebulization under intermittent positive pressure breathing.

**Patient was hydrocephalic at birth; cerebrospinal fluid was sterile at time of death.

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REFERENCES—(1) Glazko, A. J., *et al.*, in Welch, H., & Martí-Ibañez, F.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 792. (2) Unpublished data: Research Laboratories, Parke, Davis & Company, 1958. (3) Ross, S.; Puig, J. R., & Zaremba, E. A., in Welch, H., & Martí-Ibañez, F.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 803. (4) Payne, H. M., & Hackney, R. L., Jr.: *ibid.*, p. 821. (5) McCrumb, F. R., Jr.; Snyder, M. J., & Hicken, W. J.: *ibid.*, p. 837.

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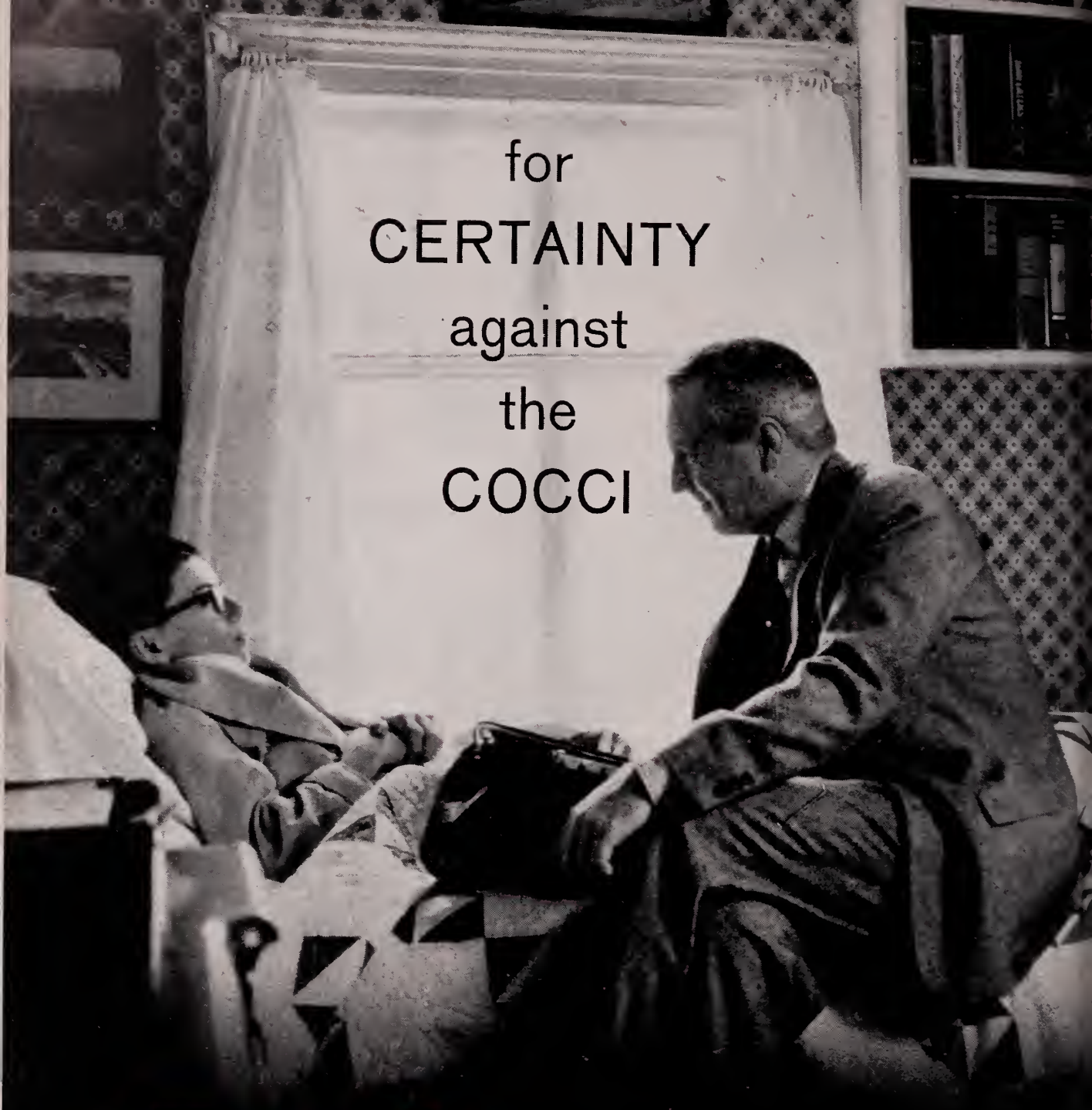
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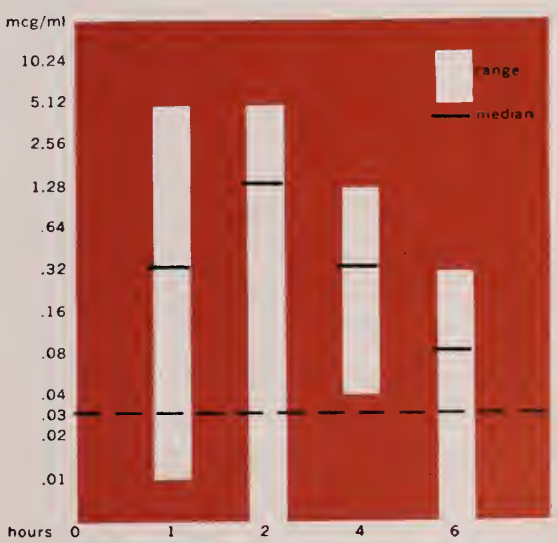
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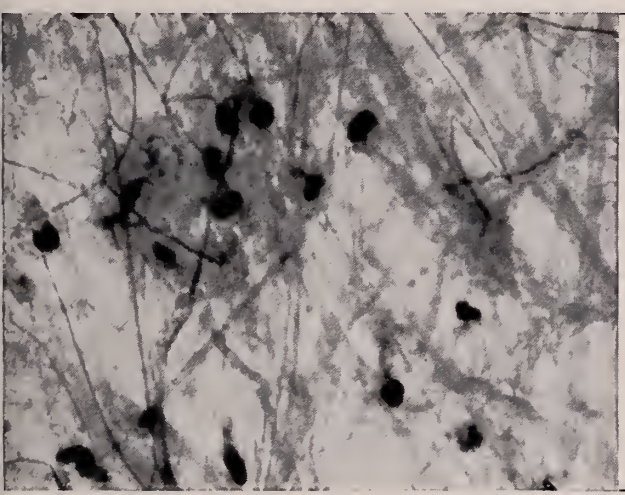
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REFERENCES: 1. Adams, J.: Advantages of combined tetracycline-oleandomycin therapy in common infections, J. Tennessee M. Assoc. *50*:446 (Nov.) 1957. 2. Andersson, B.: Pulmonary abscess cured with antibiotics, Opuscula Medica, *2*:8 (Oct.) 1957. 3. Anello, V. J., and Gerschenfeld, D. S.: Staphylococcal septicemia in a child: Treatment with a combination of oleandomycin and tetracycline, Dia med., B. Air. *30*:1921 (July 28) 1958. 4. Arneil, G. C.: Tetracycline-oleandomycin treatment of acute respiratory disease in childhood, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., October 1958, to be published. 5. Arrigoni, G.; Grignani, G. C., and Varesi, M.: A new antibiotic association in the treatment of urologic infections, Minerva med. *48*:2701 (Aug. 25) 1957. 6. Baccaredda Boy, A., and Cappelli, E.: Clinical study of the activity of a new antibiotic preparation, Signemycin, in skin conditions of infectious (pyogenous) origin, Minerva med. *48*:2690 (Aug. 25) 1957. 7. Bergdahl, U.: Clinical experiences with a so-called double-spectrum antibiotic, Signemycin. Svenska Lakartidningen *55*:1715, 1958. 8. Blundi, E.: Use of Signemycin in a chest clinic, to be published. 9. Bolognesi, C.: Preliminary results of the use of Signemycin in certain otorhinolaryngological infections due to pyogenic organisms, Minerva med. *48*:2693 (Aug. 25) 1957. 10. Brodhage, H.: Bakteriologische in-vitro-versuche mit einer kombination von tetracyclin and oleandomycin (Signemycin). Praxis *26*:579, 1957. 11. Calvi, A.: Antibiotics in the therapy of influenza and its pulmonary complications, to be published. 12. Carter, C. H., and Maley, M. C.: Application of tetracycline-oleandomycin in clinical practice, Antibiotics Annual 1956-57, New York, Medical Encyclopedia, Inc., 1957, p. 51. 13. Castellanos, A.: Signemycin in pediatries, to be published. 14. Chiappara, P.: A case of sepsis with multiple osteomyelitis treated with a new antibiotic, Minerva med. *48*:2697 (Aug. 25) 1957. 15. Chiarenza, A.: Observations on the effects of Signemycin in nongonococcic urethritis, Minerva med. *48*:2692 (Aug. 25) 1957. 16. Cimmino, A.; Boni, A., and Orsi, N.: Antibiotic activity of oleandomycin-tetracycline combination. *In vitro* study on 332 strains of *Micrococcus pyogenes* var. *aureus* clinically isolated. Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, pp. 708-715. 17. Cooper, J.; Sprogis, G. R.; Heinemann, M., and Feirer, G. M.: Therapy of amebiasis carriers with oleandomycin-tetracycline (Signemycin), Antibiotic M. *5*:302 (May) 1958. 18. Cornbleet, T., and Firestein, B. Z.: Use of oleandomycin-tetracycline (Signemycin) for acne, Antibiotic M. *4*:598 (Oct.) 1957. 19. Cupples, J. F. B., and Perry, A. W.: Acute staphylococcal endocarditis treated with tetracycline-oleandomycin successfully, Canad. M. Assoc. J. *77*:699 (Oct.) 1957. 20. Davis, W. G.: Report on tetracycline and oleandomycin used in combination. Clinical Review & Research Notes, *1*:21-23 (April) 1958. 21. DeRomana, J.; Zaldivar, C., and Falcone, F.: Actual therapeutic conduct in the treatment of osteomyelitis, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 22. Durrieu, C. A.; Rodriguez, J. B., and Petrella, E.: The use of oleandomycin-tetracycline in buccal surgery, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 23. English, A. R.; McBride, T. J.; Van Halsema, G., and Carlozzi, M.: Biologic studies on PA-775, a combination of tetracycline and oleandomycin with synergistic activity, Antib. & Chemo. *6*:511-522 (Aug.) 1956. 24. Farah, L.: Some therapeutic indications of Signemycin, Medicina, Mex. *783*:519 (Nov.) 1957. 25. Faz Tabio, H.: Severe enterosepsis treated with Signemycin, Rev. cubana pediat. *29*:3 (May) 1957. 26. Faz Tabio, H.: Signemycin in the treatment of certain diseases of the respiratory tract, Rev. cubana pediat., *30*:219 (Apr.) 1958. 27. Febles, D., and Biderman, I.: Antibiotic management of acute infections in the obstetric patient, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 28. Felder, J.: Signemycin in der padiatrie, Schweiz. med. Wschr. *88*:953 (Sept. 27) 1958. 29. Fiora, F., and Compa, F.: The combination antibiotic oleandomycin-tetracycline (Signemycin) in acute blennorrhagia, Dia med. B. Air. *30*:570 (Apr. 3) 1958. 30. Florio, I., and Scoppetta, F. P.: Sigmamicina ed occlusione intestinale sperimentale, Bulletin med. & surg. soc., Pavia, *71*:1, 1957. 31. Foradori, M.: A case of meningitis due to *Staphylococcus aureus* complicating tubercular meningitis, treated successfully with Signemycin, Minerva med. *48*:2707 (Aug. 25) 1957. 32. Frank, L., and Stritzler, C.: Newer antibiotics in the treatment of acne. Antibiotic M. *4*:419 (July) 1957. 33. Friedrich, K., and Hammerl, H.: A new treatment for bacterial infection with an antibiotic combination, to be published. 34. Gemma, G. B.; Mel, C., and Bachi, V.: First experiences with Signemycin in surgical infections, Minerva med. *48*:2643 (Aug. 25) 1957. 35. Gilley, E. W.: Clinical appraisal of tetracycline and oleandomycin used in combination, to be published. 36. Hagan, H., and Scheffler, H.: Preliminary clinical experience with oleandomycin and the double-spectrum antibiotic, Signemycin, Medizinische, *14*:477 (Apr. 6) 1957. 37. Harris, H. J.: Tetracycline and oleandomycin (Signemycin) in chronic brucellosis, to be published. 38. Hasenclever, H. F.: Comparative *in vitro* studies of hospital strains of *Staphylococcus aureus* with oleandomycin, tetracycline and an oleandomycin-tetracycline mixture, Antibiotic M. *5*:14-25 (Jan.) 1958. 39. Hegglin, R.: Ornithosis, Schweiz. med. Wchnschr. *3*:64, 1958. 40. Henne, H. F.: Clinical experiences with the double-spectrum antibiotic Signemycin, Med. Klin., Berl., *29*:1267-1270 (July 18) 1958. 41. Heredia Diaz, J.; Saavedra Zavaleta, G.; Robles, M. A., and Aguilar, D. L.: Tetracycline-oleandomycin (Signemycin) in the treatment of puerperal infections, Medicina, Mex. *38*:308, 1958. 42. Hoffmann, H.: Clinical experiences with the broad-spectrum antibiotic, Signemycin, Medizinische, *45*:1850 (Nov. 8) 1958. 43. Hoz Fabra, J.: Preliminary results of a clinical trial with Signemycin, Rev. clin. espan. *67*:101 (Oct. 31) 1957. 44. Kaiser, J. A.; Mazzarino, C.; Bajek, E. M., and P'an, S. Y.: Oleandomycin-tetracycline: Toxicity in experimental animals. Antibiotics & Chemother. *7*:255-259 (May) 1957. 45. Kanee, B., and Cockcroft, W. H.: Clinical and bacteriological studies on Signemycin (oleandomycin-tetracycline) ointment, Canad. M. Assoc. J. *78*:614 (Apr. 15) 1958. 46. Keil, P. G.; Tieszen, R. L., and Solomon, R. J.: An evaluation of Signemycin in the treatment of pneumonia, to be published. 47. Klovstad, O.: Signemycin "Pfizer" a combination of oleandomycin and tetracycline, Tidsskr. norske laegefor *15*:681 (Aug.) 1957. 48. Kohler, H. F.: Case report of the month: chronic osteomyelitis, Clinical Review & Research Notes, *1*:16 (Apr.) 1958. 49. Kraljevic, R., et al.: Investigation of the therapeutic value of the combination of tetracycline and oleandomycin, Antibiotic M. *5*:364-371 (June) 1958. 50. Kraljevic, R.: Discussion of the paper by Florentin and Sison (The role of antibiotics in Asian Influenza). Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 948. 51. Kraljevic, R.; Pearson, E., and Borgano, J. M.: Combined oleandomycin-tetracycline therapy in respiratory tract and other infections, to be published. 52. LaCaille, R. A., and Prigot, A.: Combinations of oleandomycin with oxytetracycline and tetracycline in soft-tissue infections, Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 67. 53. Levi, W. M., and Kredel, F. E.: A clinical trial of Signemycin, South Carolina M. J. *53*:178 (May) 1957. 54. Lewis, H. M.; Frumess, G. M., and Henschel, E. J.: Treatment of skin infections with tetracycline and oleandomycin, Rocky Mountain M. J. *54*:806 (Aug.) 1957. 55. Lopez, A. V., and Cohen, H. J.: The clinical trial of a combination of tetracycline hydrochloride and oleandomycin (oral suspension) in the treatment of severe pulmonary infections in children, to be published. 56. Loughlin, E. H., and Mullin, W. G.: Combined antibiotic therapy of tropical infections with Matroterra and Signemycin, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, p. 698. 57. Loughlin, E. H., and Mullin, W. G.: Combined antibiotic therapy of tropical infections with PA-765 and PA-775, Antibiotics Annual

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1956-57, New York, Medical Encyclopedia, Inc., 1957, p. 63. 58. McCloud, L. C.; Shidal, W., and Mulligan, J. L.: Clinical observations on infections treated with a combination of tetracycline and oleandomycin, to be published. 59. McFadden, H. W., and Schelhart, D.: Comparison of the *in vivo* sensitivity of micrococci to oleandomycin, tetracycline and a combination of oleandomycin and tetracycline. Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, pp. 514-519. 60. Manara, G., and Gasparetto, A.: The first clinical experience with water-soluble Signemycin, University of Padua, Minerva chirurgica *13*:535 (May 15) 1958. 61. Medina Morales, F.: The combination of tetracycline-oleandomycin (Signemycin) in the postoperative treatment of three cases of pulmonary resection, Medicina, Mex. *800*:347, 1958. 62. Mehra, B. K.: Combating the resistant staphylococci, Current Med. Pract. *1*:326-328 (May) 1957. 63. Mendiola, R.; Naranjo, R., and Briseno, F.: New contributions to the treatment of tuberculosis, Medicina, Mex. *37*:269 (June 25) 1957. 64. Mendoza Diez, J.: Treatment of osteomyelitis with Signemycin, Thesis, Universidad Nacional Mayor de San Marcos, Facultad de Medicina, Lima, Peru, 1957. 65. Moggian, G.: Preliminary results of a new antibiotic association in obstetrics and gynecology, Minerva med. *48*:2648 (Aug. 25) 1958. 66. Molinelli, E. A.; Vera Barros, E., and Ithurralde, D.: Tetracycline-oleandomycin in human brucellosis therapy, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, pp. 692-697. 67. Montilli, G., and Avellino, M.: Experienze con una nuova associazione di antibiotici (tetraciclina ed oleandomicina) in terapia dermatologica. Dermatologia *9*:3, 1958. 68. Morador, J. L., and Morador, S.: Cause, prevention and treatment of staphylococcal infection in hospitals, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 69. Morador, J. L., and Tate, L. S.: Treatment of 52 cases of infections caused by coagulase-positive staphylococci with a combination of oleandomycin and tetracycline, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, pp. 702-707. 70. Morador, J. L., and Tate, L. S.: The treatment of anorectal infections with Signemycin, An. Ateneo Clin. Quirur. *1*:52 (Jan.) 1958. 71. Morel, A. S.: Surgical infections: a guide to therapy, Clinical Review & Research Notes *1*:18-21 (July) 1958. 72. Morey, G. S.: Infections in nursing babies due to *Pseudomonas aeruginosa (B. pyocyaneus)* alone or associated with other organisms, Rev. Hosp. nino, *72*:3, 1958. 73. Oates, J. K.: Trial of Signemycin in non-specific urethritis, Brit. J. Vener. Dis. *34*:38, 1958. 74. O'Herlihy, F. C.: A clinical trial with Signemycin, Medical Press (London), p. 897 (Sept. 17) 1958. 75. Olmer, J., and Casanova, P.: Therapeutic notes: Clinical trials of Signemycin in the treatment of 59 patients, Semaine hop. Paris, Vol. 34, no. 2 (Feb.) 1958. 76. Ottolenghi, C. E.; Frigerio, E. R., and Soto Jimenez, D.: Combined antibiotic therapy in 35 cases of osteomyelitis, Bol. y trab., Soc. cir. Buenos Aires, *41*:739, 1957. 77. Pagola, J. G.; Benavides, L., and Heredia, A.: An evaluation of tetracycline-oleandomycin in the treatment of epidemic typhus, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 78. Pavone, M.; Anello, A., and Macaluso, M. P.: Signemycin in the therapy of infections of urinary passages, to be published. 79. Perez Villasante, G.: Postoperative treatment of the ear cavity, An. Soc. Mexico de Otorinolaringologia, No. *34-35*:175 (May-Aug.) 1957. 80. Prokop, O.: On the question of staphylococcus infections resistant to therapy, Der Praktische Arzt, *12*:145 (Feb. 15) 1958. 81. Quarti, M.: Efficacy of the association of oleandomycin and tetracycline in staphylococcal infections, Aggiornamento Pediatrico, *8*:11, 1957. 82. Quirno, N.; Fukelman, R., and Achaval, M.: Treatment with oleandomycin-tetracycline of infections observed in clinical practice, Dia med. *30*:2938 (Nov. 17) 1958. 83. Ragazzini, F.; Moggi, P., and Acocella, M.: First clinical applications of Signemycin in pediatrics, Minerva med. *48*:2667 (Aug. 25) 1957. 84. Randig, K.: Some experiences with Signemycin, Deutsches med. J. *8*:447 (Aug. 15) 1957. 85. Rebelledo, L. M., and Heredia, D. J.: Further clinical studies of an association of tetracycline and oleandomycin in the treatment of various infections, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 86. Rentchnick, P.: A combination of broad-spectrum antibiotics, Medecine et Hygiene, *379*:562 (Nov. 30) 1957. 87. Revelli, E., and Durando, C.: Treatment of the nonspecific inflammatory component of tuberculosis of the female genital organs, Minerva med. *48*:2658 (Aug. 25) 1957. 88. Rivera, J. A.; Brame, R. E., and Osborne, D.: Sensitivity of *Micrococcus pyogenes* from burned patients to the action of oleandomycin. The emergence of resistance to this antibiotic, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 89. Rondanelli, E. G.: The therapeutic problem of orchitis by parotitic virus, Institute of General Clinical Medicine and Medical Therapy of the University of Pavia, Bulletin med. & surg. soc., Pavia, *71*:1, 1957. 90. Saavedra Amaro, S., and Lopez Zepeda, L.: Comprobacion clinica de la Signemycin en el tratamiento de infecciones diversas, to be published in Medicina, Mex. 91. Sanchez Creus, P.: Los antibioticos de indicaciones limitadas, Rev. clin. espan. *69*:378 (June 30) 1958. 92. Sangiuolo, F.: Therapeutic action of the tetracycline-oleandomycin (Signemycin) association, Minerva med. *48*:2679 (Aug. 25) 1957. 93. Santas, A. A.; Ganora, H. M., and Brea, C. M.: Antibiotic prophylaxis in thoracic surgery, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 94. Schenone, H.: Genitourinary infections treated with the antibiotic combination tetracycline and oleandomycin, paper read at Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 1958, to be published. 95. Shubin, H.: Clinical evaluation of combined chemotherapy, oleandomycin and tetracycline, Antibiotic M. *4*:174 (March) 1957. 96. Signer, A., and Vinci, G. G.: Signemycin in the healing of wounds, Arch. Societa Med-Chirurg. Messina, Vol. II, 1957. 97. Smazal, S. F., and Crowley, P. J.: Routine use of the antibiotics tetracycline and oleandomycin in combination for the treatment of infections represented in an unselected series of general office patients, to be published. 98. Steinman, E.: Trial of an antibiotic combination as a routine agent for treatment of infections in office practice, to be published. 99. Stritzler, C., and Frank, L.: Significance of the response of acne vulgaris to antibiotics, Antibiotic M. *5*:109 (Feb.) 1958. 100. Talbot, J. R.: Experience with an antibiotic combination (tetracycline-oleandomycin) used routinely for anti-infective therapy in an office practice, Wisconsin M. J. *57*:237-238 (June) 1958. 101. Tato, J. M.; Galli, L. A.; Rechniewski, C.; Arauz, S.; Games, J.; Bello, J.; de Sebastian, G., and Bergaglio, O.: Treatment of chronic sinusitis with a combination of oleandomycin and tetracycline, Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 675. 102. Willcox, R. R.: Tetracycline and oleandomycin in combination in nongonococcal urethritis, Antibiotics Annual 1957-58, New York, Medical Encyclopedia, Inc., 1958, p. 672. 103. Willcox, R. R.: The treatment of nongonococcal urethritis with tetracycline and oleandomycin in combination (Signemycin), Medical Press (London) (Dec. 11) 1957. 104. Willemot, J. P., et al.: Signemycin in the treatment of pulmonary infections, Bruxelles med. *38*:1026 (June 22) 1958. 105. Winton, S. S., and Chesrow, E. J.: A clinical study of combined chemotherapy. Antibiotics Annual 1956-57, New York, Medical Encyclopedia, Inc., 1957, p. 55. 106. Wittmoser, R.: Hospitalismus, Chirurgische Praxis, *3*:281 (Sept.) 1957. 107. Zaldivar, C. G., and Falcone, F.: Preliminary results in osteomyelitis with tetracycline and the phosphate of oleandomycin (Signemycin), Rev. Hosp. nino *18*:151 (June) 1957. 108. Zaldivar, C. G.: Complicated forms of chronic osteomyelitis, Rev. Hosp. nino *72*:315 (Dec.) 1957.

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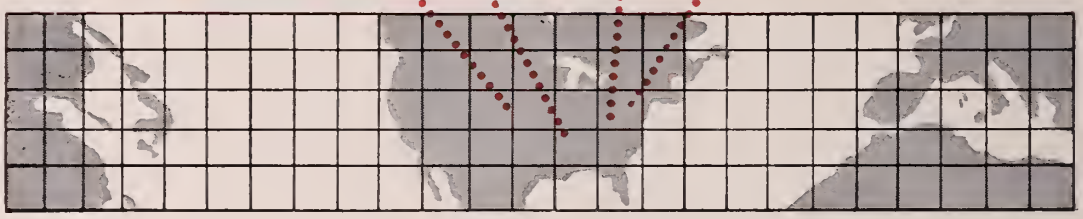
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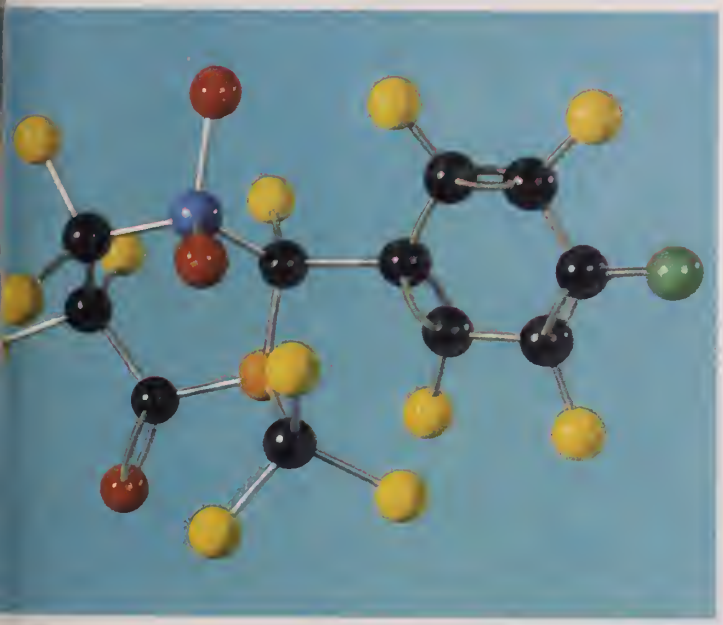
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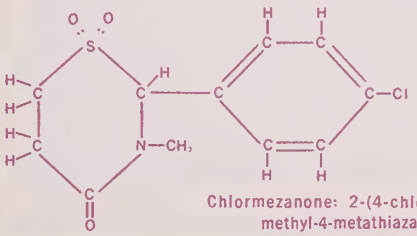
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In musculoskeletal conditions[1]

effective in **91%** of patients

INDICATIONS

- Low back pain (lumbago)
- Bursitis
- Osteoarthritis
- Fibrositis
- Myositis
- Postoperative myalgias
- Neck pain (torticollis)
- Rheumatoid arthritis
- Disk syndrome
- Joint disorders (ankle sprain, tennis elbow, etc.)

By relieving muscle spasm and pain, Trancopal permits early and active purposeful exercise and physical therapy to accomplish maximal benefits for rapid recovery.

Trancopal

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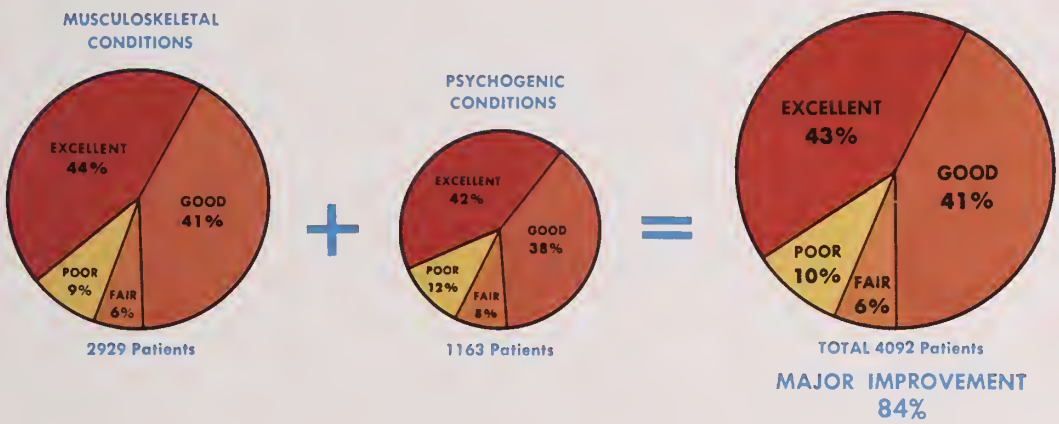
In anxiety and tension states[1]

effective in 88% of patients

INDICATIONS

Anxiety and tension states	Dysmenorrhea
Premenstrual tension	Asthma
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Because of its exceptional calmative property, Trancopal "...allows the patient to use his energies in a more productive manner in overcoming his basic problem."[2]



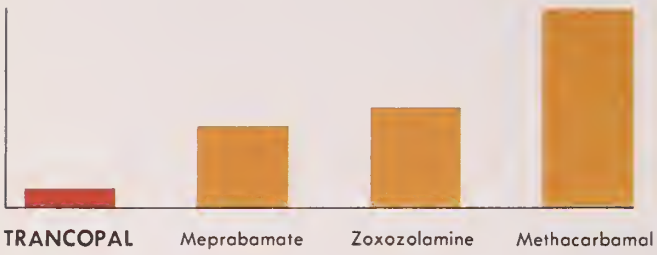
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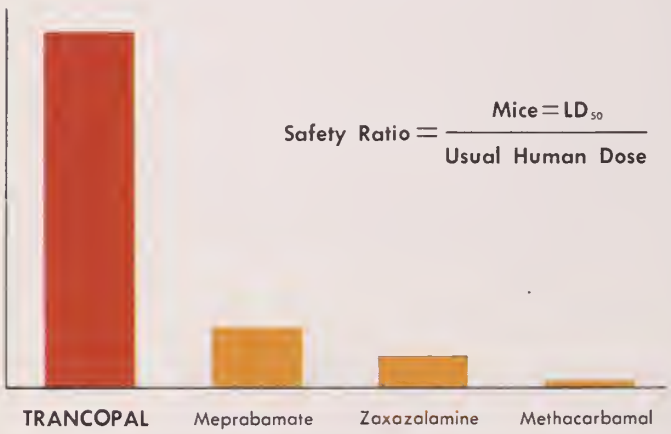
Comparison with 3 widely used central relaxants

When compared with three widely used central relaxants for activity, safety and clinical effectiveness, Trancopal offers definite desirable advantages.



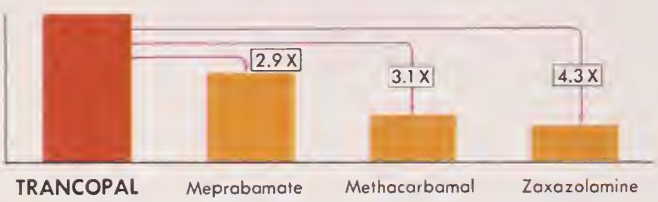
for activity

In the usual human dose, Trancopal is four to ten times as potent per milligram.



for safety

Comparative pharmacologic tests showed that Trancopal is up to thirteen times as safe or up to thirteen times less toxic. The measure of safety was the LD_{50} in mice/usual human dose.



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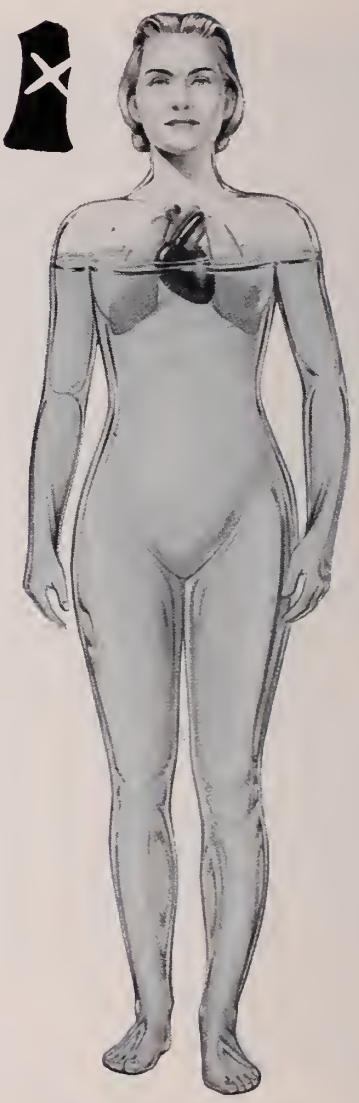
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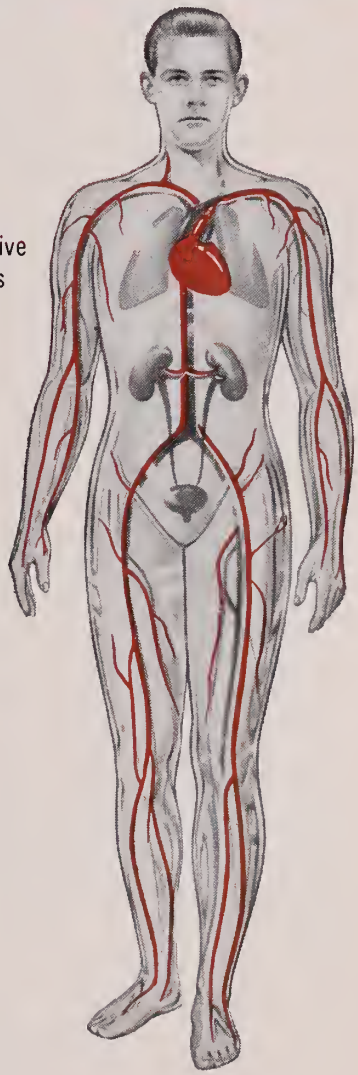
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1 Hypertension

2 Congestive heart failure of all degrees of severity

3 Premenstrual tension (edema)

4 Edema of pregnancy

5 Renal edema—nephrosis; nephritis

6 Cirrhosis with ascites

7 Drug-induced edema

8 as adjunctive therapy in the management of obesity complicated by edema

RECOMMENDED DOSAGE RANGE

In **EDEMA:** one to two 50 mg. tablets HYDRODIURIL once or twice a day

In **HYPERTENSION:** one or two 25 mg. tablets or one 50 mg. tablet HYDRODIURIL once or twice a day. (When HYDRODIURIL is used with a ganglion blocking agent, it is mandatory to reduce the dose of the latter by at least 50 per cent, immediately upon adding HYDRODIURIL to the regimen.)

SUPPLIED as 25 mg. and 50 mg. scored tablets, in bottles of 100 and 1000.

PRECAUTIONS:

It is important that dosage be adjusted as frequently as the needs of the individual patient demand.

HYDRODIURIL has shown no adverse effects on renal function and is essentially not nephrotoxic; for this reason it may be used with excellent results even in patients for whom organomercurials are contraindicated because of renal damage. The excretion of potassium is much lower than that of sodium and chloride and, as is the case with DIURIL®, the loss of potassium is clinically insignificant in the great majority of patients on normal diets. If indicated, this potassium loss may be easily replaced by including potassium-rich foods in the diet (orange juice, bananas, etc.).

Additional information on HYDRODIURIL is available on request.

BIBLIOGRAPHY:

1. Esch, A.F., Wilson, I.M., Freis, E.D.: 3,4-Dihydrochlorothiazide: Clinical Evaluation of a New Saluretic Agent. Preliminary Report; M. Ann. District of Columbia **28**:9, (Jan.) 1959.
2. Ford, R.V.: The Clinical Pharmacology of Hydrochlorothiazide; Southern Med. J. **52**:40, (Jan.) 1959.
3. Fuchs, M., Bodi, T., Irie, S., and Moyer, J.H.: Preliminary Evaluation of Hydrochlorothiazide ('HYDRODIURIL'); M. Rec. & Ann. **51**:872, (Dec.) 1958.
4. Moyer, J.H., Fuchs, M., Irie, S., and Bodi, T.: Some Observations on the Pharmacology of Hydrochlorothiazide; Am. J. Cardiol. **3**:113, (Jan.) 1959.

*HYDRODIURIL and DIURIL are trademarks of Merck & Co., INC. Trademarks outside the U.S.: DICHLOTRIDE, DICLOTRIDE, HYDROSALURIC.

MERCK SHARP & DOHME
Division of Merck & Co., INC., Philadelphia 1, Pa.

Convenient information for physicians starting diabetic patients on

DIABINESE

simple once-a-day dosage in practice

During the initial control period, the patient should check his urine at frequent intervals, and report at least once weekly for review of symptoms, physical examination, urine and/or blood examination for glucose.

The New Patient *(no previous antidiabetic therapy)*

1. Initial daily dose 500 mg. (2 tablets of 250 mg. each) with breakfast.

2. In elderly patients, initial dose 250 mg. (1 tablet) daily.

3. CONTROL PERIOD

(a) If blood sugar reaches normal levels after three to seven days, or if glycosuria disappears, lower daily dose of 500 mg. to a level between 250 mg. (1 tablet) and 375 mg. (1½ tablets of 250 mg.) with breakfast daily. In elderly patients, dosage may be reduced to as low as 100 mg.

(b) If hyperglycemia or glycosuria persists or develops, increase the daily dose from 500 mg. to 625 mg. (2½ tablets of 250 mg.) with breakfast daily. In elderly patients, dosage should be increased from 250 mg. according to patient response.

(c) Continue weekly adjustments during first month of therapy until maintenance dose has been established. Adjustments below 250 mg. daily are best made in steps of 100 mg. (one 100 mg. tablet). The maintenance dose may occasionally be as low as 100 mg. (one 100 mg. tablet daily) or, rarely, as high as 1.0 Gm. (four 250 mg. tablets) daily. Do not exceed daily dose of 1.0 Gm.

Transfer of Patient from Insulin

1. If patient is taking 40 or less units of insulin daily and gives no history of severe or "brittle" diabetic response, discontinue insulin and replace with DIABINESE as in The New Patient.

2. Complete control period as for The New Patient. Priming ("loading") doses should not be used.

3. If patient is taking more than 40 units of insulin daily, or shows evidence of severe or brittle diabetes, reduce insulin dose by 50 per cent and initiate DIABINESE therapy as for The New Patient. Further reduction of insulin dosage depends on patient response.

Transfer of Patient from Other Oral Medication

Where less than satisfactory control has been achieved with other oral medication, or where a change to once-a-day dosage is desired, DIABINESE may be successfully substituted. Such a transfer may be made by discontinuing previous oral medication, substituting DIABINESE, and continuing control period as for The New Patient. Avoid priming doses.

The clinical safety of DIABINESE has been established by more than two years' trial. By adherence to the above dosage schedule, side effects of DIABINESE will generally be infrequent, mild, and transient.

Pfizer

DIABINESE®

brand of chlorpropamide

once-a-day dosage

THE MOST EFFECTIVE ORAL ANTIDIABETIC AVAILABLE

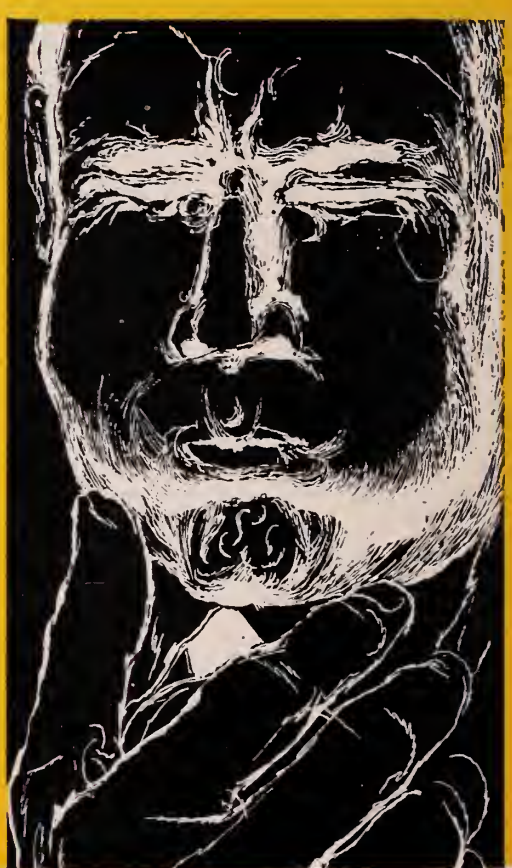
SUPPLIED. *Tablets,* 250 mg., bottles of 60 and 250, white, scored. 100 mg., bottles of 100, white, scored.

Science for the world's well-being *Pfizer* **PFIZER LABORATORIES** Division, Chas. Pfizer & Co., Inc. Brooklyn 6, N. Y.

the higher
blood levels of
potassium
penicillin V

Compoc

FOR
THOSE
COMMON
BACTERIAL
PROBLEMS



902069

IN FILMTAB® / IN ORAL SOLUTION
AND IN COMBINATION WITH SULFAS

illin®-VK

(POTASSIUM PENICILLIN V)

INDICATIONS

Against all penicillin-sensitive organisms. When combined with Sulfas, COMPOCILLIN-VK is especially effective in treating mixed infections such as may occur in the respiratory or urinary tract.

DOSAGE

Range is from 125 mg. (200,000 units) three times daily to 250 mg. (400,000 units) every four hours. Children's dosage is determined by body weight. When combined with sulfa triad, range is one Filmtab three times daily to two Filmtabs every four hours.

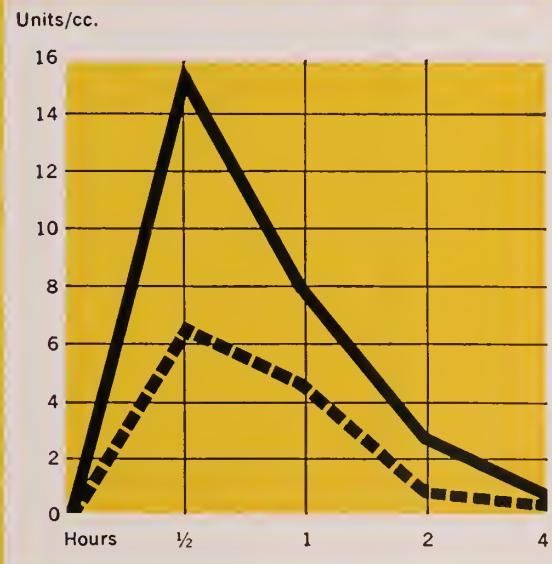
SUPPLIED

COMPOCILLIN-VK Filmtabs: 125 mg. (200,000 units), bottles of 50 and 100; 250 mg. (400,000 units), bottles of 25 and 100.

COMPOCILLIN-VK Granules for Oral Solution: In 40-cc. and 80-cc. bottles. When reconstituted, each tasty 5-cc. teaspoonful of cherry-flavored solution represents 125 mg. (200,000 units) of potassium penicillin V.

COMPOCILLIN-VK with Sulfas: Each Filmtab contains 125 mg. (200,000 units) of potassium penicillin V and 500 mg. of sulfonamides. At all pharmacies.

Abbott



The highest levels of Filmtab Compocillin-VK.

The median levels of Filmtab Compocillin-VK.

Note the high upper levels and averages at ½ hour, and at 1 hour.

Doses of 400,000 units were administered before mealtime to 40 subjects involved in this study.

®FILMTAB—FILM-SEALED TABLETS, ABBOTT. PAT. APPLIED FOR.

℞

PRONOUNCED TAY-O

Tao

(triacetyloleandomycin)

Capsules / Oral Suspension

* *designed for superior control of common Gram-positive infections*

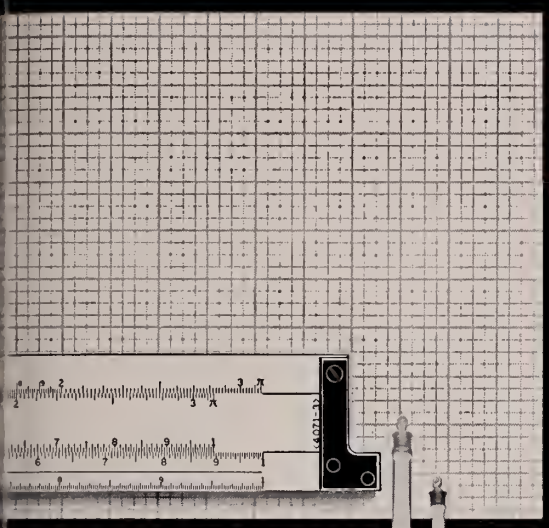




in the patient:

95% effective in published cases[1-8]

Conditions treated	No. of Patients	Cured	Improved	Failure
ALL INFECTIONS	**558**	**448**	**80**	**30**
Respiratory infections	**258**	**208**	**31**	**19**
Pharyngitis and/or tonsillitis	65	58	5	2
Pneumonia	90	66	17	7
Infectious asthma	44	38	—	6
Otitis media	31	29	2	—
Other respiratory (bronchitis, bronchiolitis, bronchiectasis, pneumonitis, laryngotracheitis, strep throat)	28	17	7	4
Skin and soft tissue infections	**230**	**191**	**38**	**1**
Infected wounds, incisions and lacerations	41	33	8	—
Abscesses	51	43	8	—
Furunculosis	58	51	6	1
Acne, pustular	43	28	15	—
Pyoderma	19	19	—	—
Other skin and soft tissue (infected burns, cellulitis, impetigo, ulcers, others)	18	17	1	—
Genitourinary infections	**28**	**19**	**3**	**6**
Acute pyelitis and cystitis	10	8	2	—
Urethritis with gonorrhea or cystitis	8	8	—	—
Pyelonephritis	4	1	—	3
Salpingitis	5	1	1	3
Pelvic inflammation with endometriosis	1	1	—	—
Miscellaneous (adenitis, enteritis, enterocolitis, subacute bacterial endocarditis, fever, hematoma, staphylococcus carriers, osteomyelitis, tenosynovitis, septic arthritis, acute bursitis, periarthritis)	42	30	8	4

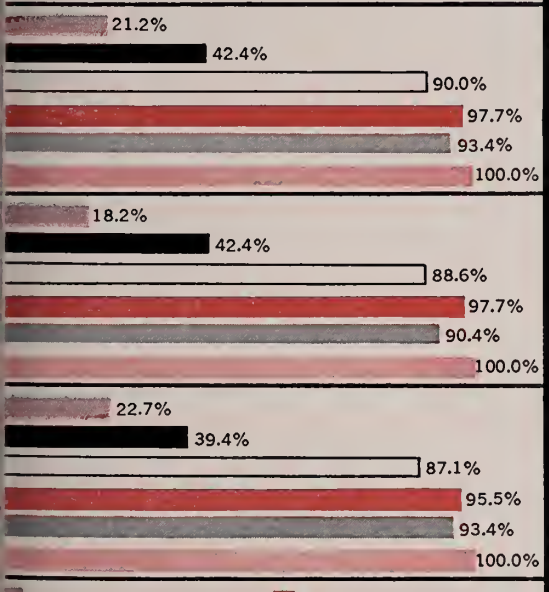


in the laboratory:



over 90% effective against resistant staph

COMPARATIVE TESTS BY THREE METHODS (DISC, TUBE DILUTION, CYLINDER PLATE) ON 130 STAPHYLOCOCCI[9]



Percentage of organisms inhibited by the range of concentrations listed for each antibiotic.

Other Tao advantages:

Rapidly absorbed—stable in gastric acid,[7] TAO needs no retarding protective coating

Low in toxicity—freedom from side effects in 96% of patients treated; cessation of therapy is rarely required

Highly palatable—"practically tasteless"[7] active ingredient in a pleasant cherry-flavored medium.

Dosage and Administration: Dosage varies according to the severity of the infection. **For adults,** the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. **For children** 8 months to 8 years, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since TAO is therapeutically stable in gastric acid, it may be administered without regard to meals.

Supplied: TAO Capsules—250 mg. and 125 mg., bottles of 60. TAO for Oral Suspension—1.5 Gm., 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. Koch, R., and Asay, L. D.: J. Pediat., in press. 2. Leming, B. H., Jr., et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 3. Mellman, et al.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 4. Olansky, S., and McCormick, G. E., Jr.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 5. Shubin, H., et al.: Antibiotics Annual 1957-1958, New York, N. Y., Medical Encyclopedia, Inc., 1958, p. 679. 6. Isenberg, H., and Karelitz, S.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 7. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy 5:527 (Aug.) 1958. 8. Kaplan, M. A., and Goldin, M.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958. 9. Truant, J. P.: Paper presented at the Symposium on Antibiotics, Washington, D. C., Oct. 15-17, 1958.

TAO dosage forms— for specific clinical situations

TAO Pediatric Drops

For children—flavorful, easy to administer.

Supplied: When reconstituted, 100 mg. per cc. Special calibrated droppers—5 drops (approx. 25 mg.) and 10 drops (approx. 50 mg.). 10 cc. bottle.

TAO-AC (TAO analgesic, antihistaminic compound)

To eradicate pain and physical discomfort in respiratory disorders.

Supplied: In bottles of 36 capsules.

TAOMID* (TAO with triple sulfas)

For dual control of Gram-positive and Gram-negative infections.

Supplied: Tablets, bottles of 60. Oral Suspension, bottles of 60 cc.

Intramuscular or Intravenous

For direct action—in clinical emergencies.

Supplied: In 10 cc. vials.

*TRADEMARK

Roerig Rx
New York 17, N.Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being


"ankle-itis"
there's pain and
inflammation here...
it could be mild
or severe, acute or
chronic, primary or
secondary fibrositis — or even
early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

. . . assured anti-inflammatory effect of low-dosage corticosteroid[1] . . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function . . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more conservative and manageable than full-dosage corticosteroid therapy—

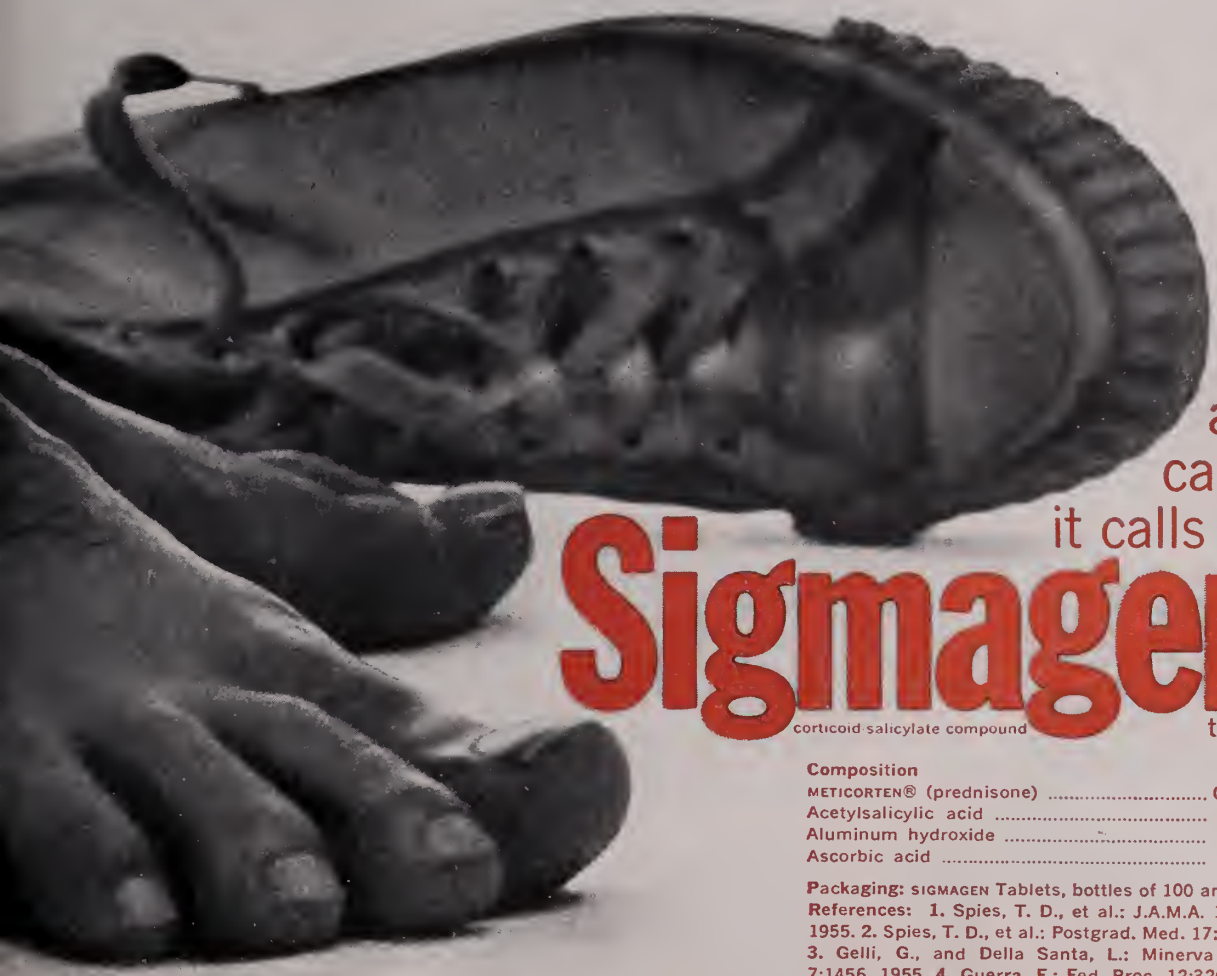
. . much less likelihood of treatment-interrupting side effects[1-6] . . . reduces possibility of residual injury . . . simple, flexible dosage schedule

THERAPY SHOULD BE INDIVIDUALIZED

acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

precautions: Because SIGMAGEN contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of SIGMAGEN.



in any case it calls for

Sigmagen®

corticoid-salicylate compound

tablets

Composition

METICORTEN® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: SIGMAGEN Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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FIRST TIME IN VIRGINIA
DESERT AIR LAMP

Recommend with Confidence

Desert Air Lamps

Produces A Safe Healthful Zone of Mild Warm Air

AS AN AID FOR RELIEF OF BRONCHITIS • HAY FEVER ASTHMA FROM COLDS COUGHS • SINUSITIS

Used for over 31 years in California and recommended by many doctors on the West Coast. Inquiries may be referred to the Los Angeles County Medical Society, 1925 Wilshire Boulevard, Los Angeles 27, California



THE DESERT AIR LAMP

Offers proven relief from symptoms of these diseases by reducing the relative humidity and creating mild warm air in the sleep zone. Its dark burning safe lava cone unit allows infants and adults alike to breathe more easily.

Special discounts to the profession

For descriptive literature and price lists write

Jamestown Products Incorporated

2321 Riverside Drive
Danville, Virginia



. . . and one to grow on



A tiny tablet of REDISOL to stimulate the appetite — to help in the intake of food for growth.

REDISOL is crystalline vitamin B_{12}, an essential vitamin for growth and the fundamental metabolic processes.

Ideal for the growing child, the REDISOL tablet dissolves instantly on contact in the mouth, on food or in liquids.

Packaged in bottles hermetically sealed to keep the moisture out and to retain vitamin potency in 25 and 50 mcg. strengths, bottles of 36 and 100 — in 100 mcg. strength, bottles of 36, and in 250 mcg. strength, vials of 12.

Also available as a pleasant-tasting cherry-flavored elixir (5 mcg. per 5-cc. teaspoonful) and as REDISOL injectable, cyanocobalamin injection USP (30 and 100 mcg. per cc., 10-cc. vials and 1000 mcg. per cc. in 1, 5 and 10-cc. vials).

REDISOL®

cyanocobalamin, Crystalline Vitamin B_{12}

MSD

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

REDISOL IS A TRADEMARK OF MERCK & CO., INC.

cherry-flavored

as they like it...



syrup pediatric drops

ACHROMYCIN® V

as they need it...

Tetracycline with Citric Acid Lederle

- broad spectrum control of more than 90 per cent of antibiotic-susceptible infections seen in general practice[1]
- fast, high concentrations in body fluids and tissues
- no irreversible side effects reported, excellently tolerated
- readily miscible in water, juices, formula.

ACHROMYCIN V: 10 cc. plastic dropper bottle for precise dosage; 100 mg. per cc. (20 drops). *Dosage:* one drop per pound body weight per day.

ACHROMYCIN V Syrup: Each teaspoonful (5cc.) contains equiv. 125 mg. tetracycline HCl. Bottles of 2 and 16 fl. oz. *Dosage:* at 45 lbs., one teaspoonful 4 times daily; adjust for other weights.

1. *Based on six-month National Physicians Survey.*

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



To the relief of musculoskeletal pain, new MEDAPRIN* adds restoration of function

Analgesics offer temporary relief of musculoskeletal pain, but they merely *mask* pain rather than getting at its *cause*. New Medaprin, in addition to bringing about prompt subjective improvement, promotes the *restoration of normal function* by suppressing the inflammation that *causes* the pain.

Medaprin, Upjohn's new analgesic-steroid combination, contains aspirin plus Medrol,** the corticosteroid with *the best therapeutic ratio in the steroid field.*† Instead of suffering recurrent discomfort because of the "wearing off" of analgesics. the patient on Medaprin experiences a smooth, *extended* relief and more normal mobility.

Indications: Medaprin is indicated in mild-to-moderate rheumatic and musculoskeletal conditions, including rheumatoid arthritis, deltoid bursitis, low back pain, neuralgia, synovitis, fibromyositis, osteoarthritis, low back sprain, traumatic wrist, sciatica, and "tennis elbow."

Dosage: The recommended dosage is 1 tablet q.i.d. The usual cautions and contraindications of corticotherapy should be observed.

Supplied: In bottles of 100 and 500.

Formula: Each Medaprin tablet contains

- 300 mg. acetylsalicylic acid, for prompt relief of pain
- 1 mg. Medrol, to suppress the causative inflammation
- 200 mg. calcium carbonate. as buffer

*TRADEMARK **TRADEMARK, REG. U. S. PAT. OFF.—METHYLPREDNISOLONE, UPJOHN
†RATIO OF DESIRED EFFECTS TO UNDESIRED EFFECTS

The Upjohn Company, Kalamazoo, Michigan

Upjohn

UNIQUE VITAMIN SUPPLEMENT

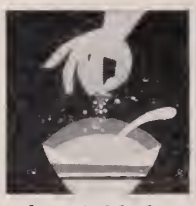
NEW VIGRAN CHEWABLES

SQUIBB MULTIPLE VITAMIN SOFT TABLETS

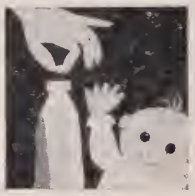
fruit-punch flavored tablets that will actually "melt in the mouth"



can be chewed like candy



can be crushed and sprinkled on cereal or other food



can be dissolved in water, juice or milk



can be sucked and will dissolve like a lozenge



can be easily swallowed (small tablet size)

VIGRAN CHEWABLES *taste like candy*, but contain *no ingredients harmful to teeth.* Important, too, is that VIGRAN CHEWABLES *dissolve easily* in the mouth and *smell good.* These advantages will also appeal to your elderly patients. And VIGRAN CHEWABLES provide at least 125% of the minimum daily requirements for vitamins A, D, B_1, B_2, niacinamide and C, and significant amounts of other essential vitamins.

Each VIGRAN CHEWABLE tablet contains:

Vitamin A	5,000 U.S.P. units
Vitamin D	1,000 U.S.P. units
Vitamin C	75 mg.
Vitamin B_1	3 mg.
Vitamin B_2	3 mg.
Vitamin B_6	2 mg.
Niacinamide	25 mg.
Calcium Pantothenate	3 mg.
Vitamin B_{12}	5 mcg.

Available in Rx-size bottles of 30 and 90.

SQUIBB

Squibb Quality—the Priceless Ingredient

'Vigran'® is a Squibb trademark

For every topical indication, a Burroughs Wellcome 'SPORIN'...



Ointment: Tubes of ⅛ oz. and ½ oz. (with applicator tip) for ophthalmic or dermatologic application.

Otic Drops: Bottles of 5 cc. with sterile dropper.



Ointment: Tubes of ½ and 1 oz. and tubes of ⅛ oz. with ophthalmic tip.

Ophthalmic Solution: Bottles of 10 cc. with sterile dropper.

NEW { **Lotion:** Plastic squeeze bottles of 20 cc.
NEW { **Powder:** Shaker-top bottles of 10 Gm.



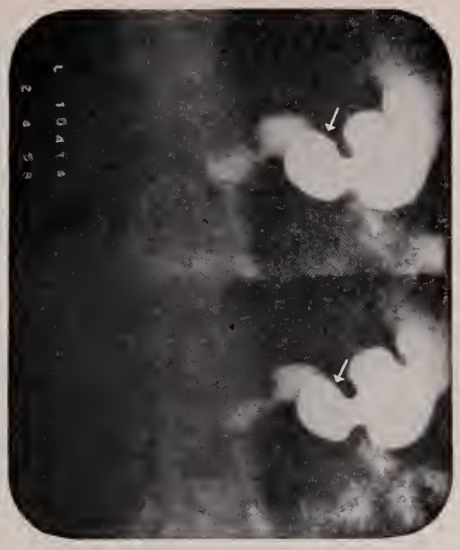
Ointment: Tubes of ½ oz., 1 oz. and ⅛ oz. (ophthalmic tip).

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

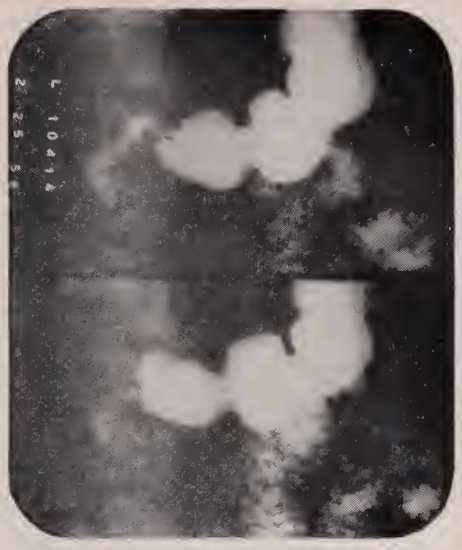
relieve the tension



—and control its G.I. sequelae



Patient A.S., age 53.
Intermittent crises of severe pain over 2 year period; hospital management with Sippy regimen provided relief of symptoms; however, symptoms recurred after each sojourn.



PATHIBAMATE *(Tabs. t.i.d. and H.S.)*; prompt relief of symptoms. Radiograph (21 days later) confirms healing of minute lesser curvature gastric ulcer crater.

predictable results in the control of tension and G.I. trauma

Pathibamate®

Meprobamate with PATHILON® Tridihexethyl Chloride* LEDERLE

Used prophylactically in anticipation of periods of emotional stress, or therapeutically to relieve tension and curb hypermotility and hypersecretion, PATHIBAMATE is particularly well-formulated for the control of gastrointestinal disorders.

PATHIBAMATE combines Meprobamate (400 mg.) — the noted tranquilizer-muscle relaxant widely accepted for safe management of tension and anxiety states — and PATHILON (25 mg.) — an extremely well-tolerated anticholinergic, long noted for prompt symptomatic relief based on peripheral atropine-like action with few side effects.

Indications:
Duodenal ulcer, gastric ulcer, intestinal colic, spastic and irritable colon, ileitis, esophageal spasm, anxiety neurosis with gastrointestinal symptoms, gastric hypermotility.

Supplied:
Bottles of 100 and 1,000. Each tablet (yellow, ½-scored) contains Meprobamate, 400 mg.; PATHILON Tridihexethyl Chloride, 25 mg.

Administration and Dosage:
1 tablet three times a day at mealtimes and 2 tablets at bedtime. Adjust dosage to patient response. Contraindicated in glaucoma, pyloric obstruction, and obstruction of the urinary bladder neck.

Also Available: PATHILON in four forms — *Tablets* of 25 mg., plain (pink) or with *phenobarbital*, 15 mg. (blue);
Parenteral — 10 mg./cc. — 1 cc. ampuls;
Pediatric Drops — 5 mg./cc. — dropper vials of 15 cc.

*PATHILON is now offered as tridihexethyl chloride instead of the iodide, an advantage permitting wider use, since the latter could interfere with the results of certain thyroid function tests.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

in cases of tension

Serpate®

(Reserpine, Vale)

. . . the preferred drug where anxiety or emotional agitation must be controlled

. . . provides sedation without hypnasis, a sense of relaxed well being and tranquility

. . . effects a gradual and sustained lowering of elevated blood pressure in patients with mild, labile or essential hypertension

supplied: 0.1 mg. and 0.25 mg. tablets in bottles of 100, 500 and 1000, or on prescription at leading pharmacies

RAUWOLFIA SERPENTINA

in cases of hypertension

Rauval®

(Rauwolfia Serpentina, Vale)

. . . double assayed to insure optimal therapeutic effect

tested chemically to insure total alkaloid content

tested biologically to insure uniform hypotensive action

. . . ideal therapy in labile and moderate hypertension or as adjunctive therapy in severe hypertension

. . . achieves gradual lowering of the blood pressure, gentle sedation, tranquilization with prolonged effect even after cessation of therapy

supplied: 50 mg. and 100 mg. tablets in bottles of 100 and 1000, or on prescription at leading pharmacies

VALE **THE VALE CHEMICAL COMPANY, INC.** *allentown, pa.*

PHARMACEUTICALS



NICOZOL®

ORIGINAL FORMULA

The ideal cerebral tonic and stimulant for the aged.

NICOZOL therapy (the original formula) affords prompt relief of apathy. Patients generally look better, feel better; become more cooperative, cheerful and easier to manage.
No dangerous side effects.

NICOZOL contains pentylenetetrazol and nicotinic acid

For relief of agitation and hostility: NICOZOL with reserpine Tablets

Supply: Capsules • Elixir

REFER TO PDR see Page 666

DRUG Specialties INC.

Write for professional sample and literature.

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In the Treatment of Rheumatic Disorders Greater stability of maintenance dosage minimizes risks of hormonal imbalance

In Sterazolidin, the anti-inflammatory actions of prednisone and Butazolidin* are combined to permit lower effective dosage of each. Clinical experience has indicated that patients can be well maintained on this combination over prolonged periods with relatively low, stable dosage levels of each component, thus minimizing the problems arising from excessively high doses of corticosteroids. Other side effects have also been gratifyingly few. Antacid and spasmolytic components are contained in Sterazolidin capsules for the benefit of patients with gastric sensitivity.

Sterazolidin®: Each capsule contains prednisone 1.25 mg.; phenylbutazone 50 mg.; dried aluminum hydroxide gel 100 mg.; magnesium trisilicate 150 mg.; homatropine methylbromide 1.25 mg.

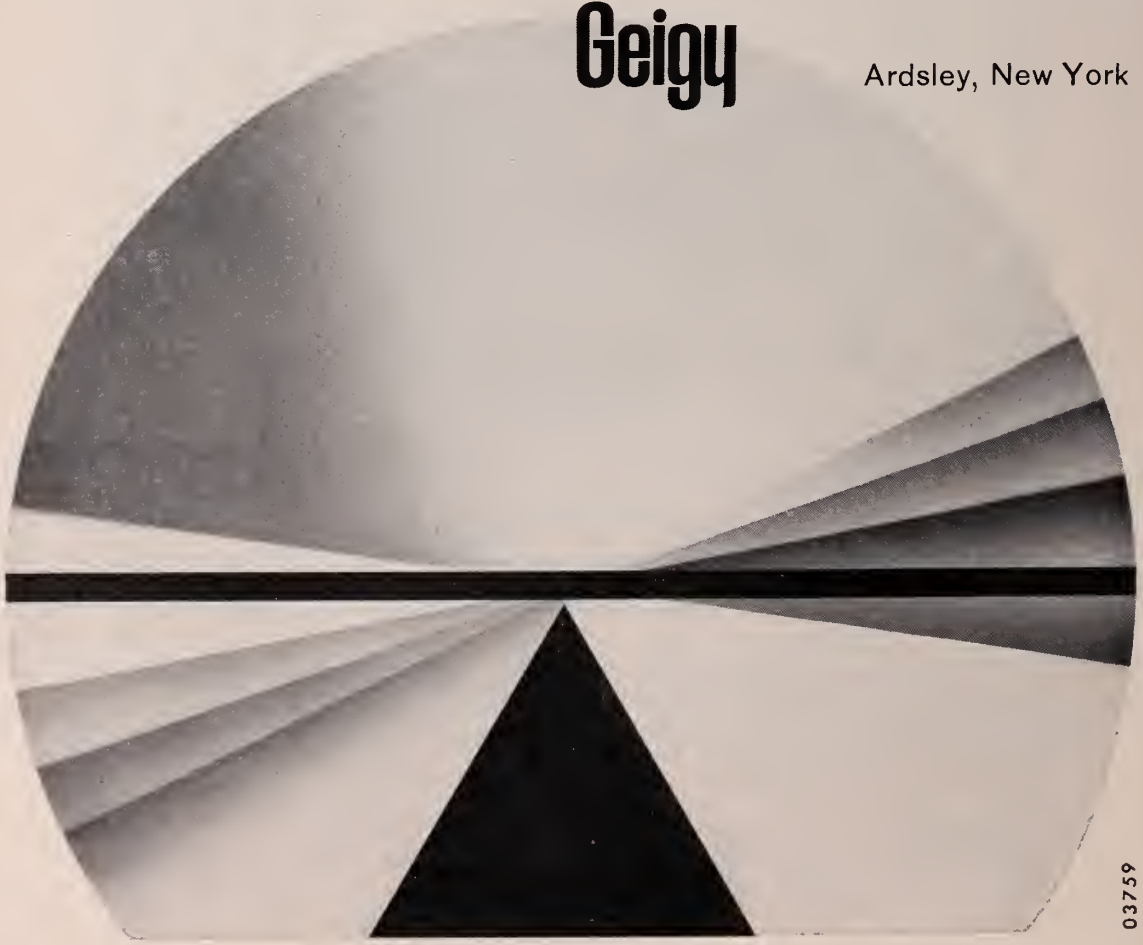
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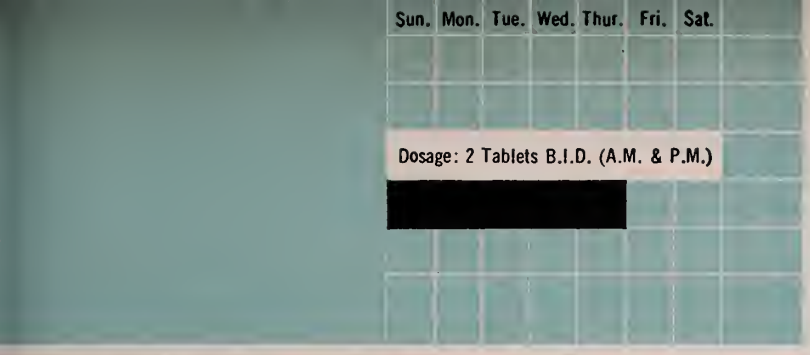
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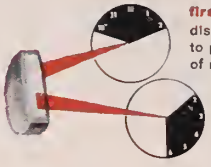
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Guest Editorial....

The Virginia Society of Internal Medicine

PHYSICIANS practicing Internal Medicine have organized a new medical society in Virginia—as though there were not already too many societies and meetings!

The American College of Physicians for twenty-five years or more has listed a fraction of the State's internists—perhaps one-half—on its roster, but has devoted itself with commendable energy to improvement of education in internal medicine in our medical schools, and to betterment of post-graduate training in internship and residency programs, has initiated the fearful examinations of the American Board of Internal Medicine which certifies the successful candidate as a qualified specialist in Internal Medicine, has stimulated research and study in Internal Medicine by awards of medals and money, has preserved and disseminated knowledge by the publication of the Annals of Internal Medicine, and yearly presents an Extravaganza of the Internists' Arts in its annual four day sessions attended by more than three thousand physicians.

With all this glory, why, pray, another society? Why the Virginia Society of Internal Medicine? Briefly, because the American College of Physicians is concerned with research and education in medicine, and not with the individuals who practice medicine. The membership of the College includes neurologists, psychiatrists, physiologists, lecturers, professors, and deans, but membership in the Virginia Society of Internal Medicine is limited to those qualified physicians who practice Internal Medicine. Thus this is an organization of working internists dedicated to the proposition that Internal Medicine must be practiced in accordance with the highest ideals and accepted concepts of medicine, and have determined that membership in this society shall be limited to internists who shall present evidence of satisfactory training, experience, and moral integrity.

Advantages must, therefore, accrue to both public and profession: to the public, or patients, that these physicians calling themselves specialists in Internal Medicine are in reality such, and are so recognized by other members of their profession; to the physicians, that the public shall recognize the existence and nature of the specialty of Internal Medicine.

The American College of Physicians approves of the formation of such state societies of Internal Medicine and already more than thirty have been formed, and have bound themselves into a national federation, The American Society of Internal Medicine. The Virginia Society, born March 1958, now counts more than 90 members, and was accepted as a member of the American Society in April 1958. The Virginia Society realizes that its membership numbers probably less than one-half of the true internists practicing in the State, for it has limited its membership to members of the American College of Physicians or diplomates of the American Board of Internal Medicine. The Society knows that many internists of superior quality are neither F.A.C.P.'s nor

"diplomates" but faces this dilemma: insist upon Board Certification for admission, or elect a physician who is recognized by his fellow physicians in his locality as a specialist in Internal Medicine?

The Internist is trained to regard a patient as a complex organism of body, mind, and soul which must be studied, probed and evaluated as a whole, and not catalogued simply as a hernia, hemorrhoid, back strain or sinus. Thus much time and effort must be devoted to a "complete examination"—never less than one hour and usually two—which demands a most detailed and searching history, and a physical examination which begins at the top of the head and ends at the toe nails. This examination should include inspection of the skin, hair, eyes, and optic fundi, ears, nose, throat, teeth, buccal cavity, vocal cords; examination of the neck, heart, lungs, abdomen, spine, and extremities; palpation of lymph glands and peripheral blood vessels; examination of genitalia, and rectal cavity, and ideally a sigmoidoscopic inspection of the lower bowel, and a "Pap" stain taken at the cervix uteri. Should an electrocardiogram be included in a "routine examination"? And how about fluoroscopic survey of the chest? Is not this of limited usefulness, and would not a 17 x 14 chest film be of real value? Then laboratory tests must be done—blood counts, urinalysis, perhaps a blood urea or other chemical test of blood, perhaps a basal metabolism test or protein-bound iodine, perhaps kidney or liver function tests, or other procedures. And all of these probing and relatively precise procedures are utilized for a single purpose—a logical and reasonable appraisal of the health of one human being.

Is all this fuss and bother worthwhile? To the patient, yes, and emphatically yes! But to others, too, this toting up of soma and psyche is of great commercial value. Life insurance companies and industries in general are discovering the tremendous value in dollars and cents of an accurate appraisal of a citizen's health. Far more expensive than a machine tool is the irreplaceable brain of a competent executive, and far less expensive than a mechanic's "repair job" is the diagnostic survey of a competent physician.

Every branch and level of government—Federal through County—is now concerning itself with the health of its citizens, and demanding innumerable reports to store in countless files. Here again the Internist must bear the load of these "surveys" and must present a report conscientiously and well performed.

But now comes the "stinger"! These diagnostic surveys require much time of a highly skilled physician and in addition the help of laboratory technicians, nurses and helpers. How much is this worth? How best to find answers to the problem of the cost of medical care? What fair solution can be made? How much is an appendectomy worth? A tonsillectomy? Consult with the surgeons of a community. How much the value of the services of an internist? Consult with whom? An individual physician, for there has not been in existence any organization to speak for him. Now, however, the Virginia Society of Internal Medicine will speak for its members, and for other internists if they desire, and will "study the scientific, economic, social and political aspects of medicine in order to secure and maintain the highest standards of practice in Internal Medicine". As a warrant for this right, the Society, representing the qualified Internists in Virginia, pledges that its membership will number only those physcians of high moral caliber and of superior training and experience who limit their practice to Internal Medicine.

M. M. Pinckney, M.D.

Chlorothiazide in the Treatment of Severe Congestive Heart Failure

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INTRODUCTION

CHLOROTHIAZIDE is a recently synthesized sulfonamide derivative that has been found to have a potent diuretic effect.[1,2] A recent study[3] has shown it to be effective in various edematous states, such as ascites, the nephrotic syndrome, and a few cases of congestive heart failure. The present study reports experience with 30 courses of chlorothiazide in the treatment of 25 patients with severe congestive heart failure. Eleven patients in this study has previously been refractory to all other therapeutic measures.

MATERIALS AND METHODS

Twenty-five male patients with definite peripheral edema and other signs and symptoms of congestive heart failure were studied. All patients were in Class IV of the New York Heart Association functional classification. Clinical diagnoses are listed in Tables 1 and 2. Eleven of these patients were classified as "refractory" heart failure because of unresponsiveness to prior therapy consisting of at least digitalization, sodium restriction, and a trial of meralluride. Sixteen patients were classified as "partially refractory" in that all had failed to improve on digitalization. Twelve of these 16 had also failed to lose weight despite sodium restriction. Two patients, although in the "partially refractory" group on one admission, developed "refractory" congestive failure subsequently and thus were included in both groups.

Patients were weighed daily. With one exception, all patients had stationary daily weight for at least three days before institution of chlorothiazide, and 16 patients had stable weights for seven or more days before treatment. Determinations of serum sodium, potassium, chloride and bicarbonate before and during treatment were done in 20 cases, and 12 or 24-hour sodium and potassium excretion was measured before and during therapy in 14 patients. Thirty courses of chlorothiazide* were observed. Dosage varied from two to three grams daily in three or four equally divided doses, and the duration of therapy was four to 33 days with an average of 11.4 days. One patient (M.K.) received 1 gm. daily only.

RESULTS

A. *"Refractory" Group: Unresponsive to All Measures*

The effects of chlorothiazide on 11 patients with "refractory heart failure" are summarized in Table 1. There were no favorable responses, as evidenced by weight loss, in this group. Eight patients had blood urea nitrogen determinations and all were within normal limits. Serum electrolytes did not change markedly except in one patient (R.B.) whose serum sodium fell to 110 mEq/l from a pre-treatment level of 138 mEq/l. This patient died as a result of myocardial infarction on the day these studies were done.

Four patients in this group had urinary sodium and potassium determinations. (See Fig. 1). Three patients showed a definite but mild increase in the 24 hour excretion of these cations. Urinary sodium excretion changed from pre-treatment levels of 7, 2, 7, and 78 mEq per 24 hours to 120, 50, 45 and 60 mEq per 24 hours during chlorothiazide administration. Urinary potassium excretion essentially paralleled urinary sodium excretion before and during chlorothiazide therapy. Urinary potassium in four patients before chlorothiazide was 22, 10, 22 and 60 mEq per 24 hours, while during chlorothiazide, it was 128, 45, 50 and 48 mEq per 24 hours, respectively.

There were no toxic effects attributable to the drug in this group.

One patient, S.G., with cor pulmonale with peripheral edema, who had failed to respond to usual

From the Medical Service, U. S. Veterans Hospital and the Department of Medicine, Medical College of Virginia, Richmond, Virginia.

*Supplied as Diuril® through the courtesy of Dr. John Beem, Merck, Sharp and Dohme.

TABLE 1

RESPONSE TO CHLOROTHIAZIDE—"REFRACTORY" GROUP

Patient	Age	Diagnosis	Duration of Treatment (Days)	Dose Grams/ Day	Weight Change	Serum Electrolytes mEq/L		
						Before Treatment	During Treatment	Side Effects
N.D. 2nd Admis.	65	H.C.V.D.	8	3	None	Na 140 Cl 104 K 5.1 CO_2 29.2	Na 140 Cl 106 K 4.5 CO_2 23.7	None
W.F.	52	R.H.D., A.I.	9	3	Gained 12 lbs.	Na 132 Cl 99 K 4.8 CO_2 27.1	Na 129 Cl 88 K 5.2 CO_2 25.6	None
F.C.	67	S.H.D., A.I.	16	3	None	Na 135 Cl 103 K 4.9 CO_2 31.7	Na 130 Cl 91 K 4.3 CO_2 29.6	None
W.L.	60	C.H.D., I.A.S.D.	11	2	Gained 4 lbs.	Na 138 Cl 86 K 5.2 CO_2 36.6	Na 130 Cl 84 K 4.9 CO_2 39	None
R.B.	52	Idiopathic Ht. Dis.	6 10	1 2	None	Na 138 Cl 105 K 5.8 CO_2 23	Na 120 Cl 92 K 5.8 CO_2	None
J.P.	64	A.S.H.D.	4 2 3	1 2 3	None	.....	.....	None
M.T. 3rd Admis.	67	A.S.H.D.	13	3	None	.....	.....	None
M.K.	65	Cor Pulmonale	6	1	None	.....	.....	None
J.G.	58	R.H.D.,M.I.	3 11	2 3	None	Na 141 Cl 98 K 4.8 CO_2	Na 137 Cl 99 K 4.7 CO_2 29.7	None
S.G.	63	Cor Pulmonale	6	2	None	.....	.....	None
J.H.	64	Idiopathic Ht. Dis.	8	2	None	Na 135 Cl 98 K 5.5 CO_2 28	Na 135 Cl 98 K 4.4 CO_2 33.5	None

therapeutic measures including meralluride, also failed to respond to chlorothiazide in dosage of 2 grams a day for six days. This patient is considered a chlorothiazide failure and is included in the "refractory" group. (See Table 1) He subsequently lost 15 pounds when atrial flutter was converted to sinus rhythm with quinidine.

Nine of these patients had blood pressure recorded twice daily before and during chlorothiazide treatment. All were normotensive and none had changes in blood pressure during drug therapy.

B. *"Partially Refractory Group: Unresponsive to Digitalis and Salt Restriction*

In the remaining patients there were 19 trials of chlorothiazide therapy. All of these patients improved clinically and lost weight. Results are shown in Table 2. The range of weight loss varied from seven to 70 pounds with an average weight loss of 19.3 pounds.

Changes in urinary excretion of sodium and potassium in nine patients are shown in Fig. 1. There was a significant increase in sodium excretion during chlorothiazide therapy. Average pre-treatment sodium excretion was 39 mEq per 24 hours. During treatment, sodium excretion averaged 148 mEq per 24 hours. In some patients, however, urinary electrolyte determinations were not done during the period of maximal diuresis. Potassium excretion increased but to a lesser extent (See Fig. 1). Urinary chloride measured in five patients in this group increased significantly, closely paralleling sodium excretion.

Serum electrolytes were measured before and during diuresis in 14 patients. In 10 of the 14, there was slight lowering of serum sodium during the period of weight loss, the maximum decrease being 13 mEq/l. The serum potassium did not change appreciably in these 14 patients. In one patient, W.C., in whom there was no pre-treatment potassium level and no 24 hour urinary electrolyte determination, the serum potassium was 2.7 mEq/l and the CO_2 combining power 33 mEq/liter on the 5th day of treatment with 2 gm. of chlorothiazide per day. The serum chlorides were unchanged except in three patients in whom the maximum decrease was 12 mEq/l. The serum bicarbonate rose slightly in

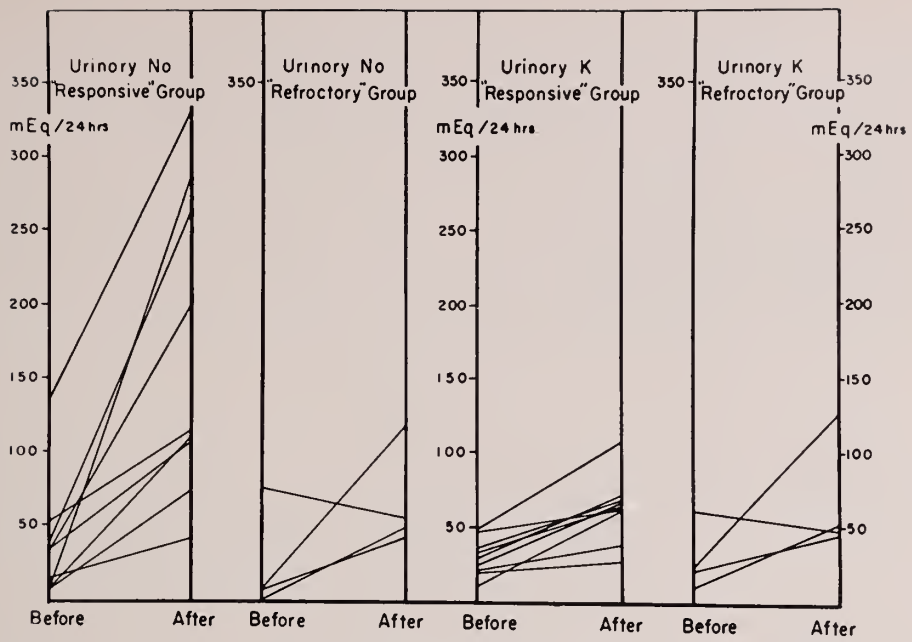


Fig. 1—Changes in urinary electrolyte excretion associated with chlorothiazide administration. The columns labelled "Before" show values in the control period prior to chlorothiazide; those labelled "After" show the maximum 24-hour electrolyte excretion which occurred while the patients were receiving chlorothiazide.

five cases, the average rise being 5 mEq/l, was unchanged in six patients, and was decreased in one instance.

Blood pressure determinations were adequately recorded twice daily in 19 courses of chlorothiazide therapy in this group. Fifteen patients were normotensive and had no change in blood pressure during drug therapy. Three patients, all of whom had hypertensive cardiovascular disease, had a lowering of blood pressure during chlorothiazide treatment of congestive failure. Patient W.W., whose average pre-treatment blood pressure was 220/120 had an average blood pressure during therapy of 180/105; patient N.D., whose pre-treatment average blood pressure was 146/97 had an average during treatment of 135/80; and patient W.M.'s pre-treatment average blood pressure was 190/120 while, during treatment, it averaged 170/90. These three patients were losing weight as well as receiving chlorothiazide. One patient, C.B., with hypertensive cardiovascular disease, did not have an effect on blood pressure during drug therapy, despite a weight loss of seven pounds.

Three patients failed to lose weight and improve when digitalis was given to the point of toxicity and dietary sodium intake was restricted, but did respond when chlorothiazide was added to the regimen. Another patient, S.Z., who had severe cor pulmonale secondary to obstructive emphysema, had been treated with bronchodilators, antibiotics, digitalis, acetazolamide, and sodium restriction. He responded with a prompt diuresis of 15 pounds when chlorothiazide was added. Patient W.R. lost eight pounds on digitalization and then, after an eight-day period of stable weight, lost an additional 10 pounds when given chlorothiazide. Patient P.O. lost 25 pounds after three injections of meralluride. For five days thereafter he maintained a stable weight. When chlorothiazide was added he lost 15 additional pounds. Patient W.M. was admitted with generalized anarsarca resulting from hypertensive cardiovascular disease. His blood urea nitrogen on admission was 70 mg.%. He was initially treated with sodium restriction, one injection of meralluride, and maintenance digitoxin without weight loss for 3 days. Chlorothiazide then was given for 24 days with a resulting weight loss of 70 pounds. The drug was discontinued for nine days, during which his weight was stable, and then given another 24 days. The patient lost an additional 31 pounds over this period of time and became edema free. Despite this diuresis, his blood urea nitrogen remained in the seventies.

There were no side effects in any of the "partially refractory" group with the possible exception of patient, W.C., referred to previously, who developed a low serum potassium level.

DISCUSSION

I. *Mechanism of Action of Chlorothiazide*

Chlorothiazide is a heterocyclic compound which possesses a free sulfonamyl group as do sulfanilamide and acetazolamide. (Fig. 2) Like acetazolamide, it is a carbonic anhydrase inhibitor *in vitro*, being intermediate in potency between sulfonamilamide and acetazolamide. In large doses in vivo, chlorothiazide alkalinizes the urine and may increase urinary potassium as do the carbonic anhydrase inhibitors.[5]

Fig. 2

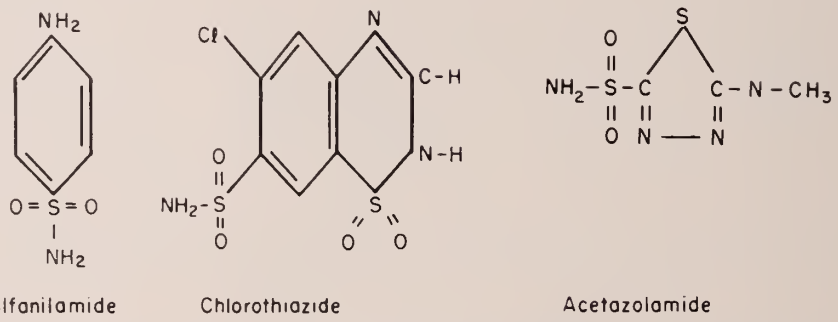


Fig. 2—Chemical structure of sulfanilamide, chlorothiazide, and acetazolamide (Diamox®). All three compounds contain the sulfonamyl group, SO_2NH_2.

In usual doses, chlorothiazide produces prominent increases in urinary sodium and chloride excretion, simulating the mercurial diuretics. There is considerable evidence, however, that chlorothiazide has a mechanism of action different from the mercurial diuretic agents. Beyer[4] has shown a significant difference in the time of peak activity of chlorothiazide when compared to a mercurial diuretic under similar experimental conditions. In addition, it was shown that chlorothiazide is effective during experimentally induced $NaHCO_3$ alkalosis, a condition in which mercurials are noneffective. Under similar experimental circumstances, chlorothiazide was shown to be effective in NH_4Cl acidosis, a condition in which acetazolamide is ineffective. Pitts[5] showed that when maximally effective doses of chlormerodrin were followed by maximally effective doses of chlorothiazide, the natriuretic and chloruretic actions of chloromerodrin and chlorothiazide were additive. It was concluded that the two drugs block two different mechanisms of renal sodium reabsorption. Studies by Ford et al[2] and Beyer[4] showed the chlorothiazide did not increase glomerular filtration rate in dogs and that the drug did not antagonize aldosterone or the anti-diuretic hormone.

II. *Pharmacology*

Oral doses of chlorothiazide as small as 250 mg. produce definite natriuresis in humans, and sodium excretion increases with increasing doses up to 2.0 gm.[6] Our data indicate that doses of 3.0 gm. daily are well tolerated. Though the number of observation is small (Table 2), they suggest that 2.0 gm. daily is ordinarily as effective as 3.0 gm. per day when judged by weight loss. Single oral doses of 2.0 gm. produce natriuresis in 2 hours, and continue to be effective for 12 hours.[6]

The infrequency in toxic effects occurring during chlorothiazide administration has been noted by others.[3,7,8] Hypokaliemia occurred once in our series, in a patient who lost 10 pounds in nine days receiving 2 gm. of chlorothiazide daily. Hypokaliemia did not occur in any of the patients who lost no weight during chlorothiazide treatment. In four such patients in whom adequate urine studies were obtained, potassium excretion closely paralleled sodium excretion, rather than varying inversely with urinary sodium.

The observation of Pitts that chlorothiazide and mercurial diuretics inhibit different mechanisms of tubular salt reabsorption suggests that clinical use of the two drugs might be a more potent saluretic program. Laragh et al[3] reported three patients with congestive heart failure, two of whom lost weight when both drugs were administered together. All three were unresponsive to both drugs given separately. Bayliss et al[7] reported similar experience in one case. The drugs were not given in combination in our series. The marked weight loss occurring in patient W.M., despite azotemia with blood urea nitrogen determinations in the seventies, is at variance with Schriener's data[8] in patients with chronic renal insufficiency in whom chlorothiazide was

TABLE 2

REPONSE TO CHLOROTHIAZIDE—"PARTIALLY REFRACTORY" GROUP

Patient	Age	Diagnosis	Duration of Treatment (Days)	Dose Grams/ Day	Weight Loss in Pounds	Serum Electrolytes mEq/L		
						Before Treatment	During Treatment	Side Effects
W.W.	65	H.C.V.D.	11	3	9	Na 142 Cl 104 K 4.7 CO_2 29.7	Na 135 Cl 91 K 4.3 CO_2 32.6	None
P.O.	80	A.S.H.D.	7	3	7	Na 141 Cl 103 K 5.2 CO_2 25.3	Na 141 Cl 101 K 4.3 CO_2 31.5	None
A.T. 1st Admis.	64	H.C.V.D.	5	2	35	.....	.....	None
A.T. 2nd Admis.	64	H.C.V.D.	22	2	13	Na 137 Cl 107 K 4.9 CO_2 28.5	Na 140 Cl 96 K 4.2 CO_2 32	None
F.W.	61	Idiopathic Ht. Dis.	13	2	15	Na 135 Cl 99 K 5.7 CO_2 27	Na 131 Cl 98 K 4.6 CO_2 23	None
W.A.	61	S.H.D.,A.I.	4	2	13	Na 136 Cl 101 K 5.3 CO_2 30	.....	None
W.C.	50	R.H.D. M.I.	9	2	10	.....	Na 136 Cl 88 K 2.7 CO_2 33	No clinical features of Hypo-ka'emia
I.F.	71	A.S.H.D.	9	2	20	.....	.....	None
W.P.	57	Idiopathic Ht. Dis.	6	3	27	Na 143 Cl 96 K 5.7	Na 130 Cl 90 K 3.8 CO_2 32.6	None
M.T. 1st Admis.	67	A.S.H.D.	8	2	15	Na 137 Cl 107 K 5.1 CO_2 22	Na 142 Cl 100 K 5.6 CO_2 31	None
M.T. 2nd Admis.	67	A.S.H.D.	6	3	16	Na 137 Cl 108 K 5.2 CO_2 25	.....	None
W.R.	63	S.H.D.,A.I.	9	2	10	Na 143 Cl 108 K 5 CO_2 25	Na 140 Cl 106 K 4.9 CO_2 25	None
N.D. 1st Admis.	63	H.C.V.D.	10	2	15	Na 140 Cl 100 K 5.4 CO_2 30.5	Na 136 Cl 99 K 4.9 CO_2 30	None
S.Z.	61	Cor Pulmonale	4 14	2 3	15	Na 140 Cl 8.9 K 5.2 CO_2 35.7	Na 137 Cl 89 K 4.3 CO_2 36.8	None
W.M. #1	61	H.C.V.D.	24	3	70	Na 141 Cl 112 K 4.3 CO_2 17.5	Na 137 Cl 108 K 6.3 CO_2 18.6	None
W.M. #2	61	H.C.V.D.	24	3	30	Na 141 Cl K 5.6 CO_2 23.7	Na 134 Cl 102 K 4.7 CO_2 23.5	None
C.B.	60	H.C.V.D.	7	2	7	Na 137 Cl 97 K 4.5 CO_2 28.8	Na 131 Cl 85 K 5 CO_2 32.5	None
G.B.	43	RHD with A.S.,A.I.	8 10	2 3	28	Na 145 Cl 96 K 4.6	Na 136 Cl 86 K 3.3	None
L.H.	86	A.S.H.D.	10	3	28	Na 138 Cl 94 K 4 CO_2 31.5	Na 135 Cl 96 K 6 CO_2 3.2	None

much less effective when moderate azotemia was present.

SUMMARY

1. Thirty courses of chlorothiazide were administered to 25 patients with congestive heart failure.

2. Eleven patients had been classified previously as cases of "refractory congestive heart failure" because of failure to respond to digitalis, sodium restriction and meralluride. There was no improvement in this group.

3. Sixteen patients were classified as cases of "partially refractory congestive heart failure" in that they had previously been unimproved on digitalization. All 16 patients improved and lost weight when chlorothiazide was added to the regimen.

4. Chlorothiazide was found in this study to be a safe and potent oral diuretic.

References

1. Novelle, R. C. and Sprague, J. M.: Benzothiadiazine dioxides as novel diuretics. J. Am. Chem. Soc. 79: 2028 (April 5), 1957.
2. Moyer, J. H., Ford, R. V., and Spurr, C. L.: Pharmacodynamics of chlorothiazide (Diuril), an orally effective non-mercurial diuretic agent. Proc. Soc. Exper. Biol. & Med. 95: 529 (July), 1957.
3. Laragh, J. H., Heinemann, H. O., and Demartini, F. E.: Effect of chlorothiazide on electrolyte transport in man. J.A.M.A. 166: 145 (Jan. 11), 1958.
4. Beyer, K. H.: The Mechanism of action of chlorothiazide. Ann. New York Acad. Sc. 71, Art. 4: 363 (Feb. 3), 1958.
5. Pitts, R. F.: Some reflections on mechanism of action of diuretics. Am. J. Med. 24: 745 (May), 1958.
6. Ford, R. V., Moyer, J. H. and Spurr, C. F.: Clinical and laboratory observations in chlorothiazide. Arch. Int. Med. 100: 582 (Oct.), 1957.
7. Bayliss, R. I. S., Marrack, D., Pirkes, J., Rees, J. R., and Zilva, J. F.: The use of chlorothiazide in the treatment of edema: A comparison with other diuretic agents. Ann. New York Acad. Sc. 71, Art. 4: 442, (Feb. 3), 1958.
8. Schriener, G. E. and Bloomer, H. A.: Effect of chlorothiazide on the edema of cirrhosis, nephrosis, congestive heart failure, and chronic renal insufficiency. New England J. Med. 257: 1016 (Nov. 21), 1957.

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Suicide May Be "Psychic Homicide"

Many persons who kill themselves may actually be the victims of "psychic murder" committed by their friends or relatives, according to a New York psychiatrist. The persons who commit "psychic homicide" are not yet legally held responsible, but theirs is a crime—a crime usually committed by omission, Dr. Joost A. M. Meerloo said in the February Archives of Neurology and Psychiatry, published by the American Medical Association.

"Psychiatrists agree that punishment of parents or spouses or bosses is one of the most frequent motivations of suicide. This form of mental blackmail may be conscious in the suicide candidate or can be more subtly hidden behind many rationalizations." But many other persons commit suicide because they are literally driven to it by someone with whom they identify. They commit suicide "because they were inadvertently aware of the wish or the command of their proxy that they had to die, though this 'homicidal' verdict had seldom been verbalized in a conscious way."

One case in which a person committed suicide on the unconscious demand of another person involved a man who refused to let his wife undergo treatment for a depressed state. He took a vacation with his secretary and his daughter, leaving his wife alone at home. After two days she committed suicide on his unconscious command. The husband remained unaware of his psychic murder.

Dr. Meerloo noted that the acting out of death wishes is usually not so obvious. However, the burden of inadvertent hostility and murderous wishes pushing those with weaker egos into depression and suicide is frequently seen.

"Especially in suicide by children, we realize how much rejection, teasing and vituperation have to do with loss of self-esteem, and how these humiliations can drive the young person to suicide."

Dr. Meerloo related his concept of psychic homicide to that of brainwashing in which a person is made by another to believe, say and do things he himself would not ordinarily do.

In the age of encroaching technology and growing community pressure, resulting in weakening ego, decreased self-esteem, and diminishing personal responsibility, these unconscious attacks on a person's will and integrity become more and more relevant."

Amenorrhea and Corpus Luteum Persistens

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AN EXHAUSTIVE DISCUSSION of types and causes of amenorrhea is not the aim of this paper. However a few pertinent remarks are in order relative to the cases to be presented.

Regarding primary amenorrhea, it has been stated, "If amenorrhea cannot be overcome by time, proper hygiene, diet, hormones, and perhaps some psychotherapy, the last treatment that can be applied is roentgen therapy."[15]

To the above list of therapeutic measures should be added "ovarian resection". Although none has been reported, cases of primary amenorrhea from polycystic ovaries or persistent corpus luteum are conceivable.

PSYCHOGENIC AMENORRHEA

To Loeser, for instance, has been attributed the belief that emotional shock can arrest endometrial growth in the post-ovulatory phase.[8] The existence of psychogenic shock-induced "hypothalamic amenorrhea" is not doubted. In these cases are usually found endometrial atrophy and ovaries with atretic follicles.[20]

Fluhmann[5] states that psychogenic amenorrhea may be due to luteinizing hormone deficiency, and, further, that normal amounts of follicle-stimulating hormone are present with a deficient estrogen production. Fletcher and Brown[4] believe that a deficiency of interstitial-cell-stimulating hormone would not appear to be the usual mechanism in secondary amenorrhea. They further state that among their cases, there was no correlation between gonadotropin excretion and clinical features. (One case out of 18 studied had persistent lactation associated with high gonadotropin excretion.)

Rakoff[16] implies that functional amenorrhea is due to a deepseated psychoneurosis, intensive psychotherapy is necessary, and the success rate is "not so great as might be desired." Rogers[17] states that since menstrual disorders may be directly associated with unconscious repudiation of femininity, amenorrhea is therefore their most logical form.

Goldzieher and Goldzieher[9] reported two cases of psychogenic amenorrhea unresponsive to steriod hormone administration. In both cases estrogen tolerance tests showed abnormal estrogen destruction.

THERAPEUTIC ASPECTS OF AMENORRHEA

Rothchild[18] states that in patients with "functional amenorrhea", cortisone has been used with some benefit although the mechanism is not clear. DeCosta and Abelman[3] report that in rabbits, cortisone has no gonadotropic properties nor does it block gonadotropin release.

In discussing amenorrhea and sterility associated with endometrial hyperplasia, Wolfe[21] states that ovarian irradiation probably should not be used until all other methods of treatment have proved unsuccessful. He reports three such cases although surgery of the ovary was not used in any. Israel[12] deplores low-dosage ovarian irradiation altogether.

According to Buxton,[2] it has been suggested that ovarian irradiation is beneficial not so much on account of "stimulation" but by the elimination of some inhibitory substance. He further states that this approach is "considered by many to be inadvisable because of the possibility of chromosomal mutations." Further, in hyperhormonal amenorrhea, ovarian resection might be preferable to irradiation if the curative effect of the latter is due to decrease in estrogen production.[2] However, Novak and Novak[14] express the fear that improper selection of cases for such therapy might set the practice of gynecology back to the days of indiscriminate "ovarian whittling".

Regarding hormonal therapy, Zondek (according to Gray[10]) states that progesterone given to a patient who has her own corpus luteum will produce either no bleeding or bleeding from a progestational endometrium. Out of Gray's 31 amenorrheic patients (ages 17-42) treated with hormones, only 8 were considered improved or cured and 5 of these also received thyroid. Gray further states "if an increased level of progesterone is maintained over a period of 3 or 4 days or more, a drop in the level will be followed by withdrawal bleeding provided there is a moderately subnormal or higher level of estrogenic hormone present."

From the Pratt Clinic, Fredericksburg.

CORPUS LUTEUM PERSISTENS

In 78 cases of postpartal amenorrhea, Hunt[11] found no instance of corpus luteum persistens or corpus luteum cyst. He postulated that in some cases, at least, marked pituitary depression by placental gonadotropins may persist into the postpartal period.

Novak and Novak[14] state "the cystic distention of a corpus luteum may at times be so great as to interfere with its normal involution, thus forming a corpus luteum persistens." Thus may be produced temporary amenorrhea followed by prolonged bleeding. Forman[6] agrees, and further states a pseudodecidua may be formed from increased or prolonged progesterone output. The palpation of the cystic ovary may lead to the mistaken diagnosis of ectopic pregnancy. He indicates that "corpus luteum cyst" and "corpus luteum persistens" are synonymous terms.

Frank[7], however, differentiates between these terms and states that amenorrhea may last for years. He also states that persistent or excessive Prolan B production can lead to follicle luteinization and resultant amenorrhea without endometrial hyperplasia; that corpus luteum persistens occasionally follows pregnancy and may be associated with intermittent breast secretion; and that the true nature of the disorder may be ascertained on endometrial biopsy. He advocates a therapeutic test in such cases: the administration of 50-75 mg. testosterone. He does admit that "in chronic amenorrhea due to persistent corpus luteum cyst, enucleation of the lutein tissue may be the only possible cure."

Fluhmann[5] states that the probable rarity of corpus luteum persistens leads one to doubt its existence. A false diagnosis might arise from the superimposition of an unrecognized pregnancy or an amenorrhea of other cause. Confusion might also arise, he states, from ovulation following an amenorrheic phase, demanding "careful analysis of the criteria which distinguish the age of the corpus." He mentions the possibility of experimental production of corpus luteum persistens from the administration of chorionic hormone.

Case #1. S. O., a 20 yr. old married white para 1-0-0-1, was first seen in consultation August 25, 1956, because of sterility and amenorrhea since her delivery on March 21, 1955. At that time she had an uneventful low forceps delivery of a normal 6 lb. 15 oz. infant. EDC by menses had been February 22, 1955. Perusal of her old chart showed the postpartal course had been nonmorbid and uncomplicated and she left the hospital on the third postpartal day. On April 13, 1955, she had a D and C for excessive bleeding from retained secundines. (Hemoglobin was 9.2 grams and 1000 cc. whole blood was given.) Shock was not present during either hospital admission. She stated she had noticed some breast smallness, loss of libido (due to cervical dyspareunia), slight hoarseness and cough. Her mother stated that the patient seemed nervous and had "no life". There was some unruliness of her hair. She denied cold intolerance. She had slight nonirritating leukorrhea. Review of systems was otherwise negative.



Fig. 1. Case #1. Old luteal tissue from right ovary. x100. Enlarged 3 times.

Physical examination: Weight 123 3/4 lb. Blood pressure 115/70. Pulse 75. EENT—negative. Fundi normal. Diffuse slight thyroid enlargement. Chest normal. Breasts small, normal glandular tissue. No secretions. Female hair distribution. Abdomen negative. On pelvic examination, the uterus was normal in shape, size, and position. Cervix had an old laceration. Vaginal mucosa did not appear atrophic. Adnexa negative, right ovary tender. Cul-de-sac negative. No cervical mucous crystals. Hemoglobin 15 gms.

Clinical course:

Vi-Thyro, one capsule a day, was prescribed. Instructed to take stilbestrol, 1 mg. per day for 21 days.

September 15, 1956. Weight 122 1/4. Cervical mucus disclosed crystal formation. Proluton 37.5 mg. administered.

October 6, 1956. Weight 122 3/4. No menses. Instructed to take stilbestrol 5 mg. per day for 21 days.

October 27, 1956. Weight 126 1/4. Blood pressure 120/70. Proluton 50 mg. administered. Cytomel 10 mcg. daily prescribed.

November 24, 1956. No menses. No cervical mucous crystals. Weight 124 1/4. Blood pressure 100/60. No change on pelvic examination. Instructed to take no further medication.

January 21, 1957. No menses. Operation: D and C; tracheloplasty; appendectomy and bilateral ovarian wedge resection. The left ovary was about 1/3 normal size; the right about 1/2 normal size, containing a 1 cm. cyst at the proximal pole. The pathologist reported "secretory endometrium and corpus luteum cyst".

February 16,1957. Weight 126 1/2. No menses. Bimanual examination normal. No cervical mucous crystals. Cervix well-healed, sounded with difficulty. Minimal bleeding after sounding. Cavity felt dry on sounding. To take stilbestrol 5 mg. daily and return in 3 weeks.

June 25, 1957. Did not return as instructed. Had a normal 4 day period beginning March 1 and again "in early April". On examination the right ovary was twice normal size. Uterus in midposition, not palpably enlarged. No cervical mucous crystals.

January 21, 1958. Delivery of a normal 6 lb. infant. The mother suffered an intrapartal hemorrhage and was given 500 cc. whole blood.

Following discharge she bled at home and was treated with Methergine by her local physician. She was last seen April 26, 1958, normal menses having resumed.

Case #2. K.D., a 21 year old unwed colored para 1-0-0-1, was first seen October 12, 1957, having had amenorrhea since delivery on July 13, 1956. She said she had delivered at "10 months" and had a 6 lb. 8 oz. stillborn infant. (Death was due to tentorial tear and hemorrhage.) Postpartal course had been uneventful. She complained of feeling tired. She also had occasional headaches, insomnia and constipation. Weight 143 1/2. Blood pressure 126/90. Thyroid not palpable. No breast secretions. The uterus was anterior, slightly small. Ovaries were small. Cervix clean, no mucous crystals. Proloid 60 mg. per day prescribed and cyclic therapy with stilbestrol-progesterone started.

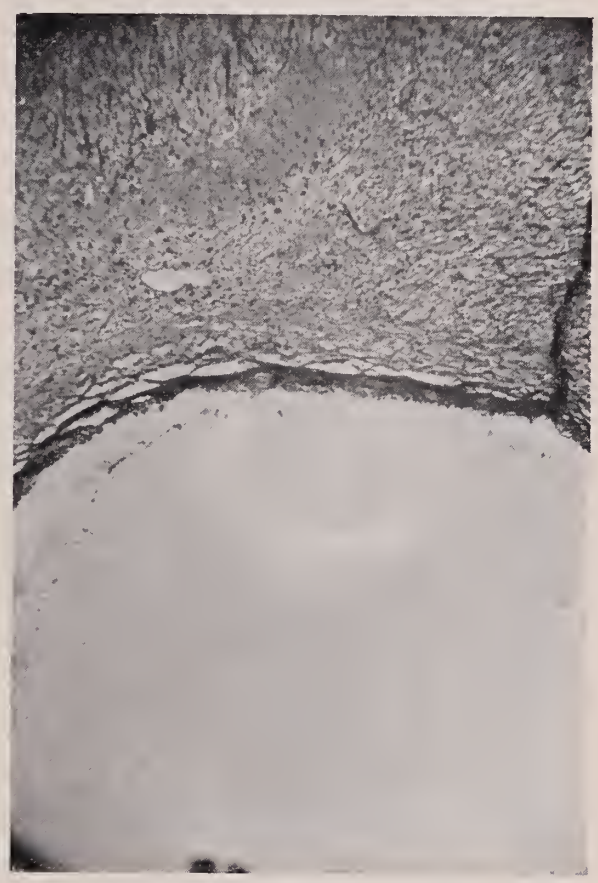


Fig. 2. Case #2. Old luteal tissue adjacent to cyst lined with granulosa cells. x10. Enlarged 3 times.

November 2, 1957. No menses. No cervical mucous crystals. Some nausea

and urinary frequency. Weight 143 3/4. Given 2 cc. Cyclogesterin intramuscularly and Dexedrine Spansules 15 mg.

November 16, 1957. No menses. Pelvis same. No cervical mucous crystals. Wet smear disclosed Trichomonas vaginalis. External os stenotic. Cytomel 25 mcg. daily prescribed. To take Enovid, one tab. daily for 21 days.

December 14, 1957. Feels fine. No menses. No cervical mucous crystals. Weight 148. Hemoglobin 80%. Pelvis same. To take no further medication.

January 16, 1958. No menses. X-ray of sella turcica normal. Operation: D and C; appendectomy; ovarian wedge resection. Cervix was stenotic and dilated with difficulty. Endometrium appeared grossly normal. The left ovary was slightly enlarged (not detected on examination at time of D and C) with a thick capsule and many small cysts. A blood-filled corpus luteum was noted. The right ovary was smaller than normal and sclerotic. Wedging of both ovaries performed. Old luteal fragments noted in the right ovary. The pathologist reported bilateral ovarian follicular cysts, a hemorrhagic corpus luteum cyst, and secretory endometrium.

February 8, 1958. No menses. Pelvis normal. Cervical mucus bloody. Cervix sounded easily. Weight 158 1/4.

March 29, 1958. States she had a 7 day normal flow beginning February 19 and a 5 day normal flow beginning March 20. Uterus slightly hypertrophic on bimanual examination. Weight 152 3/4. Blood pressure 122/80.

COMMENTS

The history of hemorrhage on Case #1 makes one think of Sheehan's syndrome, but there were no stigmata of panhypopituitarism. A few earmarks of hypothyroidism were present, however. Even lacking these or laboratory evidence of thyroid deficiency, it is desirable to employ small doses of thyroid medication empirically in cases such as these.

Case #2 also had some earmarks of thyroid dysfunction, especially the progressive weight gain. It would be of some interest to have had tests of thyroid function performed.

It would also have been enlightening perhaps to have had psychiatric consultation in both cases. Case #1 usually was accompanied by her mother on each visit. This in itself bespeaks a possible psychologic aspect to the problem. Case #2 was unwed and lost her baby in a traumatic delivery. Thus in Case #2 we are aware of a potential emotional shock. Unless the bleeding episode in Case #1 produced some marked psychologic trauma, we can find on superficial inspection no such factor.



Fig. 3. Case #2. Same as Fig. 2, x100. Enlarged 3 times.

It is also interesting that both patients had 10 month gestations according to menstrual history. This is probably a coincidental affair. I am not

aware of any reports on the relation between postdate labor and menstrual disorders, nor have I observed any relationship.

Although Rakoff deplores his low success rate, one might well feel the same about any facet of medical practice. It may be that in many cases of amenorrhea resistant to psychotherapy, anatomic changes have set in such as to preclude cure by conservative means, where earlier attack might have been more fruitful. Therefore, failure of psychotherapy to produce catamenia need not imply that the condition did not originate in an emotional upheaval. Conversely the simultaneous occurrence of psychoneurosis and amenorrhea need not imply a cause-and-effect relationship. A psychologic aberration may coexist with an organic lesion (witness the failure of hypnotherapy in a case of Stein-Leventhal syndrome.[13])

Since cortisone had been reported to have no stimulatory, mimicking, or inhibitory relationship to gonadotropins, any effect it might have on a persistent corpus luteum would probably be by virtue of direct action, possibly through some effect on ovarian connective tissue.

Regarding a testosterone therapeutic test, any benefit that might accrue therefrom would also presumably be by direct action since the pituitary gonadotropins would be already inhibited by the ovarian hormones. In any case there would be no certainty of the diagnosis of corpus luteum persistens or corpus luteum cyst without ovarian biopsy. A presumptive diagnosis might be made, however, on endometrial biopsy. An ovarian cyst accompanying amenorrhea might be of follicular origin and these usually regress spontaneously without treatment. Then, too, the use of medication might be of psychological value in cases of "hypothalamic amenorrhea".



Fig. 4. Case #2. Secretory endometrium. x 100. Enlarged 3 times.

Ovarian irradiation might conceivably be of value for a corpus luteum persistens for those who care to use this approach. This or ovarian resection probably acts by destroying the source of progesterone, thus disinhibiting pituitary gonadotropins and permitting reestablishment of the pituitary-ovarian cycle. On the other hand if psychological trauma be the prime factor, any of the patient's "guilt" feelings might be subconsciously atoned for by the "punishment" of surgery, with resumption of menses.

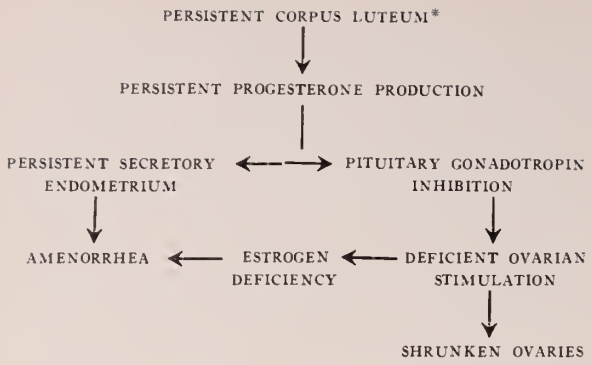
Neither corticoids, testosterone, nor irradiation was employed in the cases here presented. Estrogens, progesterone, and thyroid were, however, given adequate trials. Gonadotropin and hormone determinations were not done, although results of such tests would be most interesting.

CONCLUSIONS

In cases of amenorrhea refractory to conservative approaches, it would be well to keep in mind the diagnosis of corpus luteum persistens and the benefits obtainable through ovarian resection. In advocating such for hyperhormonal amenorrhea, Buxton might well have included such a condition as well as the polycystic ovary syndrome. Whatever the origin of a persistent corpus luteum, be it emotional, hormonal or mechanical, the ultimate pathologic changes in the ovary could well be analogous to those of the Stein-Leventhal syndrome—cyst formation, capsule thickening, increased pressure in the organ, and impaired circulation.

In Case #1, both ovaries were shrunken. In Case #2, one was shrunken and the other slightly enlarged, cystic, and thickened. In both cases the adnexa felt normal on bimanual examination. The endocrine-pathologic relationships seem fairly obvious. (See Chart)

Since the corpus luteum produces estrogen as well as progesterone,[1] marked atrophic changes in the



*Southam states there is some evidence that this could occur, but suggests that most of the time the chain of events would be: PERSISTENT CORPUS LUTEUM ⟶ PERSISTENT PROGESTERONE PRODUCTION (Pseudo-pregnancy) with a short period of amenorrhea ⟶ PITUITARY INHIBITION ⟶ FAILURE OF CORPUS LUTEUM ⟶ WITHDRAWAL BLEEDING.

vaginal mucosa need not occur. Assuming the scheme is correct, laboratory tests should show elevated pregnandiol excretion and diminished gonadotropins. Further laboratory investigation of this entity is in order.

The syndrome of corpus luteum persistens should embrace the following factors:

1. Anovulation, amenorrhea, and sterility.
2. Secretory or pseudodecidual endometrium.
3. High pregnanediol and low gonadotropin excretion.
4. At least one shrunken ovary (depending on duration of amenorrhea).
5. Adnexal mass (sometimes).
6. Lack of response to cyclic hormone and thyroid therapy.
7. Lack of response to psychotherapy.
8. Possible response to testosterone, cortisone, or x-ray.
9. Cure from ovarian resection.

To this list might be added the finding of uterine hyperinvolution or atrophy (as in case #2). Thus we almost have a Chiari-Frommel syndrome (which is not a separate entity, according to Hunt), lacking only the breast secretion.

It is concluded that the syndrome of the persistent corpus luteum is not so rare as had been thought. The cases of amenorrhea resistant to psychotherapy, the cases amenable to treatment by ovarian irradiation, the so-called Chiari-Frommel syndrome might all have begun as luteal amenorrhea.

In the early stages the endometrium should be progestational. With persistent gonadotropin suppression and luteal aging, an irreversible stage of exhaustion might be reached where atrophic changes set in and all therapy avails naught.

SUMMARY

1. Two cases of amenorrhea due to corpus luteum persistens are presented, both cured by ovarian resection.
2. Some aspects of the origin and treatment of amenorrhea are discussed.
3. A table of endocrine-pathologic relationships is presented.
4. The clinico-pathologic aspects of the syndrome are listed.

References

1. Barfield, W. E., and Greenblatt, R. B.: Am. J. Obst. & Gynec. 64:1117, 1952.
2. Buxton, C. L.: M.Clin. North America 36:705-720, 1952.
3. DeCosta, Edwin J., and Abelman, Maxwell A.: Obst. & Gynec. 1:273, 1953.
4. Fletcher, R. F., and Brown, P. S.: Clin. Sci. 16:669-675, 1957.
5. Fluhmann, C. F.: The Management of Menstrual Disorders. Philadelphia, W. B. Saunders, Co., 1956.
6. Forman, Isador: Obstetrics and Gynecology. St. Louis, The C. V. Mosby Co., 1958, p. 64.
7. Frank, Irving L.: M. Clin. North America 32:1618, 1948.
8. Fremont-Smith, Maurice, and Meigs, Joe V.: Am. J. Obst. & Gynec. 55:1041, 1948.
9. Goldzieher, M. A., and Goldzieher, J. W.: J. Clin. Endocrinol. 12:42, 1952.
10. Gray, Laman A.: Am. J. Obst. & Gynec. 58:1169-1185, 1949.
11. Hunt, Arthur B.: Obst. & Gynec. 1:522, 1953.
12. Israel, S. Leon: Am. J. Obst. & Gynec. 76:443-446, 1958.
13. Kroger, W. S., and Freed, S. C.: Psychosomatic Gynecology. Philadelphia, W. B. Saunders Co., 1951.
14. Novak, Emil, and Novak, Edmund R.: Gynecologic and Obstetric Pathology, 4th Ed. Philadelphia, W. B. Saunders Co., 1958, pp. 337-340.
15. Queries and Minor Notes: J.A.M.A. 157:1664, Apr. 30, 1955.
16. Rakoff, A. E.: M. Clin. North America 32:1516, 1948.
17. Rogers, Floyd, S.: Am. J. Obst. & Gynec. 59:323, 1950.
18. Rothchild, Irving: Clin. Obst. & Gynec. 1:183, March 1958.
19. Southam, Anna L.: Personal communication.
20. Stieve, H.: In Fluhmann. (Op. cit.)
21. Wolfe, Samuel A.: Am. J. Obst. & Gynec. 59:261, 1950.

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Low Back Pain

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THE PATIENT with low back pain, with or without sciatic pain, has always been a problem to the physician. It is said that Hippocrates is believed to have advised the use of the hot cautery in the treatment of patients afflicted with such complaints. The use of his method probably accomplished two purposes. It allowed the physician to feel that he was doing something in a difficult situation. Secondly, it terrified the patient to such an extent that he stayed away from the physician and refrained from bothering him with his troublesome complaints. The physician today can offer the patient suffering from such complaints more effective methods of treatment.[1]

The anatomy of the vertebral column involves practically all structures of the human body. The spinal column is an indicator of muscle bone balance. The complex interrelationship of muscle, tendon, bone, ligament, joint, nerve and blood supply is a consideration in the presence of abnormal deviation and curvature of the spine. The human spinal column is the central axis of the skeleton and is situated in midline of the posterior aspect of the trunk. It is composed of thirty-three vertebrae; twenty-four of which are true or movable and nine false or fixed. The lower five movable are the lumbar vertebrae. The sacrum is composed of the first five fixed vertebrae and the coccyx is composed of the remaining three to five fixed vertebrae. The vertebral column functions as a pillar of support for the trunk and a case for the protection of the spinal cord, nerve roots and meninges. Cephaled it supports the skull and laterally it gives attachments to the ribs which receive some weight of the upper limbs. Caudad it is supported by the pelvis through which the weight of the trunk is transmitted to the lower limbs. All vertebrae are built on the same general principle but their individual structure is modified according to their position. The typical vertebra is composed of a strong body in front which carries and transmits weight. The body is the most fixed part of the vertebral column. The neural arch is attached behind and encloses the spinal cord.

Strong pads of intervertebral discs are placed between the bodies of contiguous vertebrae and the arches are connected by ligaments and tend to overlap one another. The arch is relatively more movable than the bodies. The neural arch has spinous, articular and transverse processes as well as laminae and pedicles.

The most striking characteristic of the complete column when viewed as a whole is the presence of curves. There are two sets of curves in the vertebral column; namely, the primary or accommodation curves and the secondary or compensation curves. In the saggital plane there are four of these. There are convex forward curves in the cervical and lumbar regions. Concave backward curves are seen in the thoracic and sacral zones. The thoracic concave curve is primary as well as the sacral curve. These primary curves are for the accommodation of the thoracic and pelvic viscera.

The secondary curves compensate for the assumption of the upright position. Their convexities are directed backward and develop because of changes in the intervertebral discs.

The lumbar curve lies between the twelfth dorsal vertebra and promontory of the sacrum. It develops between the ninth and twelfth post natal month when the child begins to walk.[2] When the normal lumbar curve becomes acutely lordotic, that is the angle between the fifth lumbar and the sacrum is abnormally acute, a potentially weak back results. When the convexity of this lumbar curve is lost or reversed into a typical flat back, a rounded lumbar back results which has a tendency for development of low back pain.[3]

Since low back pain is only a symptom and may result from such a variety of causes, each patient presents a problem in diagnosis. The etiology of low back pain with or without sciatica are many. A number of such etiological factors may be listed as follows: (1) gynecological disturbances such as uterine displacements or salpingitis; (2) urological disturbances; (3) faulty posture; (4) herniated nucleus pulposa; (5) psychogenic factors; (6) trauma; (7) fibrositis and myositis; (8) gastrointestinal disturbances; (9) muscular imbalance; (10) obesity; (11) spondylolisthesis; (12) use of appliances over long periods of time prolonging disability; (13) congenital anomalies; (14) assymetrical articulating facets and; (15) sacroiliac disturbances.

Time does not permit consideration of these many factors singularly. However, I shall attempt to discuss briefly those of an orthopaedic basis. Generally there are two broad classes of low back pain: (1) those which occur rapidly as the result of an injury or excessive stress or strain, and (2) those which come on insidiously as a result of faulty mechanics, congenital anomalies and progressive pathological conditions.[4]

Probably the most common cause of low back pain is the simple sprain of the actual joints of the vertebrae. The articulating joints of the vertebrae are true joints in that they are enclosed by joint capsule synovia and have cartilagenous articulations. These can be sprained just as any other joint such as the wrist, ankle or finger. Quite frequently acute low back pain is due to involvement of the soft tissue structures surrounding and supporting the vertebrae. This type of pain is often complained of in the early summer when too vigorous exercise is indulged in after months of inactivity during winter and early spring. It is seen frequently following digging in spring gardens, lifting heavy weights and striking enthusiastically at a golf ball. Many of these individuals after the initial attack will in a few minutes recover to continue carrying on again. Such patients seek medical advice the following day when the patient states he was so stiff and painful that he had to roll out of bed and crawl on his hands and knees before he limbered up enough to enable himself to walk. It is believed that in the interval between the initial injury and arising from bed the fascia, ligamentous structures and muscles reacted through contracting and edema, thus causing the disability. The treatment of the above is varied depending upon the resources at hand. As a rule bed rest will cure the patient in a few days supplemented by local application of heat in the form of heating pads, diathermy, and heat lamps and analgesics. When there is point tenderness present, infiltration with one per cent Novocain will relieve spasm and pain.

Compression fractures or fractures of the articulating pedicles may be caused by very slight injuries, especially in elderly people whose bones have become decalcified because of improper diet, senility and other reasons. Thus, I emphasize very strongly the necessity for taking x-rays on all patients who complain of low back pain regardless of how trivial the injury seemed to have been.

Congenital anomalies are not uncommon in the low back area and are mostly benign. They do have a tendency to favor an unstable back. A person may go many years with no complaints in reference to his low back and then begin having progressive low back pain. It is believed that the most frequent site of low back pain is in relation to an unstable lumbosacral articulation. In the most stable type of joint the facets face laterally and medially. In the usual anterior-posterior roentgenogram the observer looks through the facet joint space visualizing the articular surface between the facets. An infinite variety of facet relationship is often observed to the extremely unstable articulation in the caphalad-caudal type of facet which may be present on one or both sides of the vertebral column. These as a rule permit an undue amount of motion at the lumbosacral joints. Frequently associated with excessive mobility is posterior displacement of the fifth lumbar vertebra on the sacrum. The vulnerability of the intervertebral foramina by its alteration in size and shape through the mobility of the intervertebral discs and articular facets has been excellently expressed by Danforth and Wilson.[6] When there is narrowing of the disc space, subluxation of the facet joints occurs which causes a narrowing of the intervertebral foramen of the spinal nerves. Putti for many years has maintained that sciatica is caused frequently by narrowing of the foramen through pathological conditions of the intervertebral articulations, the articular facets.[7] The back of such mechanical instability is susceptible to stress and strain. In the more stable back subject to the same stresses, only slight symptoms develop. The laminae of the fifth lumbar or first sacral may not be united in the midline. When the defect is broad with protrusion of a sac from the spinal canal the condition is a spina bifida. When the defect is narrow and there is no protruding sac it is referred to as a spina bifida occulta. Many cases of back pain have been attributed to this condition. Such a defect is not significant except that it contributes additional weakness when other defects are present.

The normal lumbosacral angle is approximately thirty-five degrees with the horizontal plane. An acute lumbosacral angle when present intensifies any symptoms present. In many individuals the line of relationship is actually vertical so that there is a shearing strain at this joint or a tendency for the fifth lumbar vertebra to slide downward and forward off the sacral platform. Von Lackum has pointed out that if the angle is beyond fifty degrees the stresses placed on the lumbosacral joint are severe and there is great instability.[8] The center of gravity

of the trunk is represented by a vertical line through the center of the third lumbar vertebra. When the vertical line passes as much as half inch anterior to the sacrum more strain is placed on the muscles and ligaments of the low back than is believed to be normal.

Sacralization of the transverse processes of the fifth lumbar vertebra is often seen. These may be unilateral or bilateral. According to Hagger,[5] the lumbosacral facets are usually rudimentary in this condition and thus an unstable back may be present. The fifth lumbar or first sacral vertebra may be affected. There may be union of the wing of the transitional vertebra to the sacral wing on one or both sides. Even when the transitional vertebra is sufficiently fused to the sacrum to prevent motion symptoms may still arise from the lumbosacral area. The transitional vertebra tends to occupy a position normally occupied by the first sacral vertebra and its superior surface may be sharply inclined from the horizontal. The joint between the transitional vertebra and the next lumbar vertebra is subject to the same mechanical weaknesses as usually affect the lumbosacral joint.[9,10]

Another mechanical fault observed in the lumbosacral joint is spondylolisthesis. In this condition failure of a bone fusion due to a defect in the pedicles of the involved vertebrae is present. In other words the upright shearing force of man causes a gravitational slipping forward of usually the fifth lumbar vertebra on the sacrum. Although attacks of severe pain may be due to increased displacement, most of them are due to the strain placed on the soft tissues.

Lack of stability rather than the presence of displacement is the cause of symptoms. The term prespondylolisthesis refers to an obvious failure of bone continuity in the posterior elements but without any forward displacement on the sacrum.

Over the past ten years one of the more common causes of mechanical derangement which has been observed causing sciatica has been posterior protrusion of the lumbar intervertebral discs. The intervertebral space is composed of three main elements, the nucleus pulposa, the annulus fibrosus and upper and lower hyaline plate. The normal discs act as a cushion for the central nervous system from the shocks of daily activity. It serves to transmit weight of the trunk from one vertebra to another and it also permits mobility of the spine. The nucleus pulposa is a centrally placed amorphous mass. In the young and middle aged it is believed to be under considerable tension. In old age it loses its compressibility and resiliency and becomes less differentiated from the annulus fibrosus. Two possible explanations for the presence of these protrusions have been postulated. They may be due to sudden rupture of the annulus fibrosus as the result of raising the internal disc pressure above the breaking point of the annulus fibrosus. Another explanation is that degeneration occurs in the annulus fibrosa and even the disc itself as a result of wear and tear of ordinary use. Through a small fissure there may be a slow gradual extrusion of the mass or a sudden one which can be precipitated by mild trauma. In the former there are recurring episodes of low back ache over many years before the extruded mass produces an attack of sciatica.[10] It is my opinion that there is degeneration present and that herniation is hastened or precipitated by mild trauma. I believe that degeneration of the annulus is encouraged by instability of the supporting structures of the vertebral column. When the nucleus is removed and no fusion is done, narrowing of the joint space occurs and this enhances the possibility of pressure on the nerve roots as the foraminae narrow from subluxation of the facet joints. If the patient should come to surgery because of a herniated disc as a rule a fusion should be carefully considered at the same time.

We see many severe injuries of the back sufficiently severe to cause a break in continuity of the tissues but the vertebra is fractured and the patient has no disc syndrome. Saunders and Inman[11] in their studies reveal that the annulus does take part in the degeneration and becomes so thin as to be unable to retain the nucleus even under normal stress.

Hauser[12] postulated the cause of back pain to functional decompensation which is dependent upon all factors which increase the load or decrease the strength. Overweight or carrying excessive burdens would be causative factors. Debilitating diseases, poor hygienic conditions and lack of exercise would be contributing factors in a functional decompensation. The combination of increased load and decreased strength would make decompensation come on more rapidly.

The great majority of all patients with low back pain with or without sciatica are treated conservatively and I believe surgery should be resorted to only in those cases who have recurrent attacks so often as not to make continuation of conservative therapy a sound approach. Surgery should also be resorted to in those cases who fail to respond to conservative treatment.

Conservative plans have been advocated and written about by Henry,[13] Breck and Bascom[14] and others. This plan of treatment is directed toward relief of pain, relaxation of muscle spasm, regression of inflammation, correction of the deformity and to return the patient to useful activity.

The treatment varies as to whether or not the back ache is acute, recurrent or chronic. The acute severe cases are treated best by bed rest preferably in a hospital with the back rest raised to forty-five degrees and knee rest about the same. This flexed position is maintained even if the patient lies on his side. He is advised not to lie flat in bed either on his back or face except when the bed is lowered to allow diathermy or other heat therapy three to four times daily. The heat helps control spasm. Massage may also be given to alleviate pain and spasm. Narcotic drugs may be required in the severe cases but salicylates are generally used. Tolserol is used to help relieve spasm. The dose is .1 gram every four hours.

As soon as it is feasible, in four to five days depending upon how the patient feels, flexion exercises are given. These consist of lying flat and (a) pulling the head and neck forward; (b) with the knees flexed, pushing upward on the pelvis and (c) attempting to flex both knees up over his abdomen. The patient does each of these exercises about five times for three periods daily following heat therapy. After ten days to two weeks at bed rest, depending upon how the patient feels at that time, a flexion body cast or a canvas support with stays is applied in a position to maintain a flat back. The support should be long enough to cover several vertebrae beyond the lumbar vertebrae. The flexion cast is worn from six to eight weeks as well as the canvas support. The same exercises are carried out with the cast on as far as mobility will allow. Another exercise is prescribed after the cast is removed or if a canvas support is worn which can be removed when exercises are taken. The last exercise prescribed is one in which the patient stands against the wall and rolls his pelvis upward in order to flatten his back. These exercises are prescribed in order to tone up the muscles of support and to teach the patient to maintain his lower vertebrae in physiological balance. Other important instructions given the patient are:

1. Never sleep on your abdomen. Sleep on your side with knees drawn up.

2. Never bend backward or reach up overhead backward.

3. Never lift loads in front of you above your waistline.

4. Sit with the pelvis rotated forward in a slightly "slumped" position.

5. When possible, elevate the knees higher than the hips when sitting.

6. Avoid standing as much as possible.

7. Avoid high heels as much as possible.

If flexion treatment fails and there is evidence of low back instability, then a fusion of the spine in flexion should be performed to maintain the normal relationship of the lower lumbar vertebrae. To accomplish this after a disc is removed, if it were present, a bone block is snugly mortised between the fifth spinous process and the sacrum or between the fourth spinous process and the sacrum, with the joint flexed so as to reduce subluxation of the articular facets. The facet joints are pegged with small bone grafts and bone chips are laid beside the bone block. This allows the facets to be in normal relationship and the nerve root foramina to be opened so as to allow adequate room for the traversing nerve root. The patient remains in the hospital for fourteen days following surgery and then a flexion cast is applied which is worn for eight to nine weeks. After this, exercises are given to tone up muscle balance.

I have not mentioned the arthritides or infectious diseases or malignant diseases which may affect the low back as they are distinct problems in themselves and require approaches in diagnosis and therapy much too lengthy to discuss at this time. I have attempted to present some of the more common causes of low back pain which I believe are due to instabilities of the vertebral column in the lumbosacral area. Patients with such complaints can be treated successfully by the general practitioner through the conservative measures which have been described.

Bibliography

1. Walsh, M. N.: Clinical and Neurological Aspects of Low Back and Sciatic Pain. Radiology 33: 681-687, December 1939.
2. Carey, E. J.: Low Back Pain: A Symposium, Anatomical Aspect. Wisconsin M. J. 39: 427-446, June 1940.
3. Mock, H. E.: Low Back Pain. Wisconsin M. J. 42: 389-400, April 1943.
4. Ryerson, E. W.: Low Back Pain: A Symposium, Orthopaedic Aspect. Wisconsin M. J. 39: 459-461, June 1940.
5. Haggert, G. E.: Clinical Observations on Low Back Pain and Sciatic Pain, Surgical Clinics of North America 723-730, June 1944.

6. Danforth, M. S. and Wilson, P. D.: The Anatomy of the Lumbosacral Region in Relation to Sciatic Pain. J. Bone & Joint Surg. 7: 109-129, January 1925.

7. Putti, V.: New Conceptions in the Pathogenesis of Sciatic Pain, Lancet 2: 53, 1927.

8. Von Lockum, H. L.: The Lumbosacral Region. An Anatomic Study and Some Clinical Observations. J.A.M.A. 82: 1109-1114, April 5, 1924.

9. Ferguson, Albert B.: Roentgen Diagnosis of the Extremities and Spine. Paul B. Hoeber, 1949.

10. Barr, J. S. and Mixter, W. J.: Posterior Protrusion of tht Lumbar Intervertebral Disks. J. Bone & Joint Surg. 23: 444-456, April 1941.

11. Saunders, J. B. de C. M. and Inman, V. T.: Pathology of the Intervertebral Disk, Arch. Surg. 40: 389-416, March 1940.

12. Hauser, E. D. W.: Low Back Pain Due to Functional Decomposition of the Back. Wisconsin M. J. 44: 869-873, September 1945.

13. Henry, M. O.: Conservative Treatment of the Disk Syndrome, Minnesota Med. 27: 809-811, October 1944.

14. Breck, L. W. and Basom, W. C.: The Flexion Treatment of Low Back Pain. J. Bone & Joint Surg. 25: 58-64, January 1943.

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Diabetic Blindness

Blindness as a complication of long-term diabetes may be prevented by early detection and adequate control of the disease, a new study has suggested. The study, conducted at Joslin Clinic, Boston diabetes detection center, lends support to the "growing conviction" that complications of long-term diabetes are related to the degree of control maintained over the years.

Writing in the February 28 Journal of the American Medical Association, Drs. Howard F. Root, Stanley Mirsky and Jorn Ditzel said the prevalence of blindness due to diabetes has been rising as more persons survive diabetes for long periods.

Diabetes appears to seriously disturb the body's whole metabolism (the physical and chemical changes in the body). This disturbance apparently plays a role in the development of a degenerative eye condition known as proliferative retinopathy in which there are changes in the retina and blood vessels. It may lead to blindness.

The doctors studied the records of 847 persons who developed proliferative retinopathy during the last 30 years. They found that none of the patients had good control of diabetes through diet or insulin therapy from the onset of the disease. All had severe diabetes of long duration, usually beginning at a relatively early age.

However, many other patients are known to have survived diabetes with onset in childhood for periods of 20 to 30 years without any evidence of retinopathy when their diabetic treatment had been adequate.

The authors feel that proliferative retinopathy can be prevented and postponed by early diagnosis and continuous control. Physicians are "obligated to plan treatment and supervise management in such a way as to provide the best control attainable at the present time. . . ."

The study showed:

—That the 847 patients had diabetes from an average of 17 years before developing proliferative retinopathy.

—That nearly half of them had diabetes before they were 20 years old and the rest before the age of 40. Most of them had difficulty in controlling the disease.

—That among the last 206 consecutive cases there was no case of blindness in a patient under 20 years of age, but that 25 per cent of those over 20 were blind.

In summary, three factors appeared to influence the development of retinopathy in diabetics. They are: long duration of the ailment; the inability to maintain adequate control over the disease, and most importantly, the early age of onset. Generally when diabetes begins early, it is severe, whereas diabetes developing late in life is generally mild. Thus early diagnosis and continuous control of diabetes is of "maximum importance in postponing and preventing" proliferative retinopathy.

Rupture of the Duodenum

Discussion and Case Reports

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RUPTURE of the duodenum is a relatively rare occurrence. The area of "blowout" usually occurs along the posterior wall of the second or third portion of the duodenum[2], and because of its retroperitoneal position, egress of air into the free peritoneal cavity is prevented. This means that the usual, reliable sign of air meniscus under the diaphragm in the upright abdominal x-ray is absent. Rupture is always associated with blunt trauma and in particular with steering wheel injuries. Rothchild and Hinshaw[8] emphasized the finding of retroperitoneal gas bubbles on roentgenograms without actual free air being present. However, there are no other specific tests presently available to establish the diagnosis other than clinical judgment and a high index of suspicion. It seems important, therefore, to emphasize those clinical findings which help the surgeon to make a correct preoperative diagnosis. This is necessary not only for satisfaction of professional ego, but also to save the patient's life. The mortality rate of undiagnosed or late treatment cases is high, and ranges from thirty to fifty per cent.[9,6,5] It should be pointed out however, that since 1952 this mortality has progressively diminished as a result of increasing surgical skill and diagnosis. Emphasis must now be placed on lowering of morbidity by still earlier diagnosis and laparotomy. Two case reports follow in which in the first, a correct, early diagnosis was made and laparotomy performed with good results. In the second case there was a delay in diagnosis and laparotomy resulting in prolonged duodenal drainage of a fistula, extended morbidity and hospitalization.

Case I—M. M. age 45—steering wheel injury following a truck accident on 11/3/58.

Physical examination on admission revealed an ashen gray, white male suffering from extreme abdominal pain. Examination of the heart and lungs was within normal limits. Abdominal examination revealed diffuse rigidity without localized rebound. No masses were palpated. The remainder of the physical examination was within normal limits. Blood pressure was 140/60. Chest x-ray, flat and upright, of the abdomen on admission revealed no evidence of fractured ribs or intrathoracic injury. There was no free air present within the peritoneum.

Laboratory studies revealed hematocrit of 42 white count 9,000 with normal differential. Urinalysis revealed clear urine, specific gravity 1015, with no red cells present.

It was felt because of the patient's essentially stable condition, that is normal blood pressure, normal hematocrit, and no x-ray evidence of perforated viscus, that he should be followed and watched carefully for evidence of intraperitoneal bleeding with a recheck of the hematocrit at frequent intervals and careful observation to rule out splenic damage. The patient was accordingly catheterized and placed on heavy doses of sedation. Because of extreme pain the sedation dose was increased several times. Repeat hematocrit did not reveal loss of blood and blood pressure remained within normal limits throughout the hospitalization.

However, because of muscular rigidity and increasing abdominal symptoms it was felt that the possibility of intra-abdominal organ damage or blind retroperitoneal duodenal rupture was a good possibility and exploratory laparotomy was advised.

At the time of operation a left paramedian incision was made and generalized exploration of the abdomen initially did not reveal evidence of pathology. There was no blood present within the peritoneum, the spleen and liver appeared normal. Following this the transverse colon and omentum were elevated and retroperitoneal area was inspected. It became immediately apparent that gas bubbles were present, trapped in the retroperitoneal area, and the diagnosis of perforated viscus was established. Accordingly, the duodenum was mobilized by the method of Kocher, and in the region of the second and third duodenum on the posterior wall in the retroperitoneal area a long 3 cm. tear was found to be present. This was closed using interrupted inverting sutures in two layers. Care was used not to stenose the duodenum in this region. The area was copiously irrigated with warm saline and a long Penrose drain placed down to the region of the rupture. An incidental appendectomy was performed.

The post-operative course was satisfactory. A long tube was placed through the pylorus and suction was used for forty-eight hours in order to decompress the duodenum and prevent profound ileus. Large doses of penicillin and streptomycin were given, and the tube was removed as soon as active peristalsis could be ascertained. The patient did well, had a per primam healing of the wound, and was discharged on the tenth postoperative day.

Case II—V. K.—Age 40—White Female—This patient was admitted on 10/21/58 following an automobile accident in which her upper abdomen and chest were struck by the steering wheel. Patient was admitted in a semi-conscious state and with exquisite abdominal pain. Initial laboratory studies at the time of admission, except for an elevated white count of 10,000, were within normal limits. Hematocrit was normal. Blood pressure was stable for the first four hours.

Chest x-rays, flat and upright of the abdomen were obtained at the time of admission and there was no free air present in the peritoneal cavity. Chest x-ray was within normal limits.

Abdominal examination revealed some rigidity, however, the rigidity was not compatible with the degree of abdominal pain. It was felt that this patient should be observed, followed carefully with hematocrits, repeat blood pressure determinations, etc. Accordingly, the patient was given intravenous fluids, kept off all food by mouth and followed for twenty-four hours. It became apparent at the end of that time that laparotomy would be necessary because of increasing pain, elevation of the white count and evidence of intraperitoneal soilage.

Laparotomy was performed and large amounts of small bowel contents were aspirated. It was not possible in view of the extensive peritonitis to do a definitive operation at this time. However, a large drain was placed in the region of the duodenum and first portion of the jejunum. Post-operatively the patient did extremely poorly, was maintained on i.v. fluids and had continuous sump-drainage of small bowel contents. On 12/18/58 a second operation was performed in an attempt to close the obvious small bowel fistula. At this laparotomy a tear was found at the duodenojejunal angle from which large amounts of small bowel contents were freely exuding.

Closure of this lesion was performed, and the area was again drained. The patient, however, expired on 12/19/58.

A post-mortem examination revealed hemorrhages in both adrenals, and diffuse peritonitis.

It seems obvious that this death was preventable had the diagnosis been strongly suspected. This case emphasizes the point that an exploratory laparotomy should be performed at an early time following blunt trauma to the abdomen or chest where there is suspicion of small bowel or duodenal rupture.

A comparison of the course of these two patients classically demonstrates the need for early laparotomy in all suspected cases of ruptured duodenum. The following points of emphasis are made to aid the surgeon in this diagnosis:

1. History of blunt trauma to the abdomen—usually a steering wheel injury.
2. Severe abdominal pain with muscular rigidity and absence of localized rebound. Progressive muscle guarding and pain with occasional radiation to the back or region of the testicles.
3. Absence of free air under the diaphragm but with the possibility of retroperitoneal gas bubbles on close inspection of the roentgenograms.
4. Initial laboratory studies showing normal hematocrit and red cell count with elevated white count. The hematocrit remains roughly normal on repeat studies, however, the white cell count becomes progressively elevated.
5. Relatively stable blood pressure throughout.

In a small group of patients there may be a symptom free period lasting for several hours.[3] Usually, however, the patient presents with severe abdominal pain which becomes progressively worse and which radiates through to the back. Testicular pain and occasionally priapism occur—possibly due to retroperitoneal sympathetic nerve irritation.[1] Although the patient may appear ashen, the blood pressure, hematocrit and red cell count rarely change unless there is associated damage to other organs such as spleen, liver or kidney.

SURGICAL TREATMENT

Once the diagnosis is suspected an early laparotomy is mandatory. There is no place for a primary treatment with intubation, antibiotics and hopeful waiting. This approach will result only in a duodenal fistula, with or without pancreatitis and late fistulalization and will require delayed drainage of the fistula. A prolonged hospitalization, loss of electrolytes and difficult parenteral fluid problems, not to mention the untold loss of time and misery to the patient, make a so-called "conservative" non-operative" approach contraindicated. Laparotomy should

be performed with a general exploration of the abdomen. Usually, no immediate pathology will be apparent. The greater omentum and transverse colon must then be lifted and the retroperitoneal area inspected. At this time the diagnosis can quickly be made by the finding of retroperitoneal air bubbles. Treatment now must consist of:

1. Mobilization of the duodenum and exposure of the area of rupture.
2. Primary closure of the area of rupture with careful trimming of the edematous edges of the area. Interrupted sutures seem to give the best closure and care must be taken not to stenose this region of the duodenum.
3. Careful inspection of the pancreatic bed for evidence of pancreatic extravasation.
4. Saline irrigation of the retroperitoneal area, and closure of the abdomen with care to leave a large Penrose drain down to the rupture site.
5. Passage of a Levin tube or double lumen tube through the pylorus for constant forty-eight hour suction. This affords complete duodenal decompression, prevents profound ileus and also obviates the problem of tension at the suture line.

Complications following closure include extensive cellulitis of the retroperitoneal area and peritonitis. Subhepatic abscess and subphrenic abscess, wound infections, and duodenal stenosis are all rare late complications.

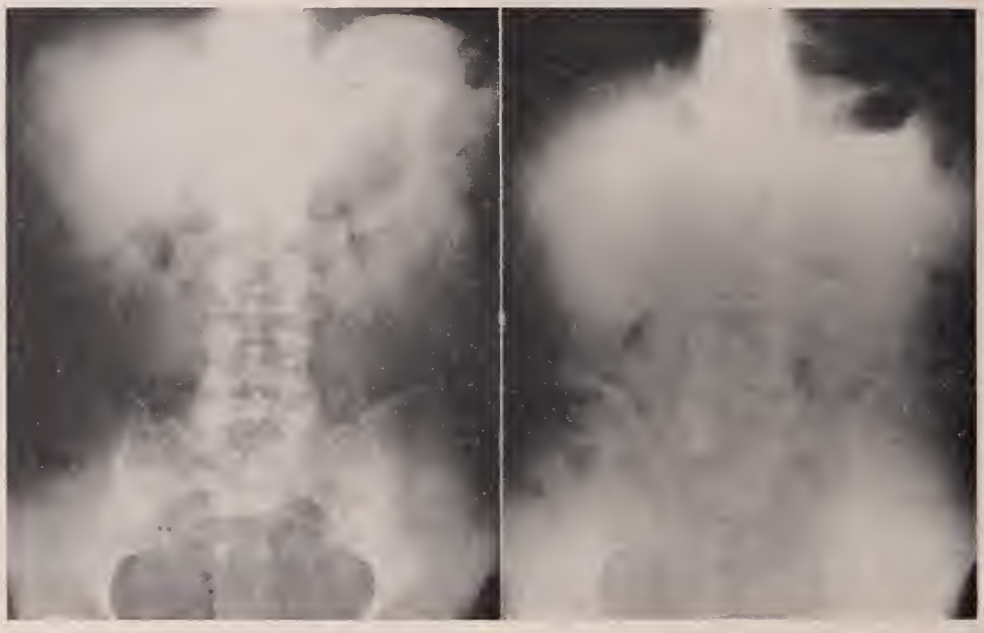


Figure I. A & B

Showing flat and upright x-rays of the abdomen but do not reveal evidence of free air under the diaphragm or blunting of the psoas shadow.

RETROPERITONEAL RUPTURE OF DUODENUM
Cases reported since 1952 emphasizing type of accident and early clinical findings

AGE	TYPE INJURY	PRESENTING SYMPTOMS	LESION LOCATION	ASSOCIATED LESIONS	AUTHOR AND YEAR
31M	Steering Wheel—	Delayed abd. Pain due to unconsciousness	Duodeno-jejeunal angle	Colles Fracture	Keith et al. (4) 1954
23M	Steering Wheel—	Severe abd. Pain	3rd Portion of Duodenum	None	Keith et al. (4) 1954
26M	Steering Wheel—	Severe abd. Pain	2nd Duodenum	None	Pirkle (7) 1953
49M	Abdomen struck— by lunging horse—	Increasing abd. pain	2nd Duodenum	None	Rothchild et al. (8) 1956
39M	Truck Accident—	Severe abd. Pain	2nd Duodenum	Injury head of Pancreas	Strode et al. (10) 1955
13M	Fall with inj. against curb	Increasing abd. pain	3rd Duodenum	None	Strode et al. (10) 1955
45M	Steering Wheel—	Severe abd. pain	2nd Duodenum	None	de Niord 1958
40F	Steering Wheel—	Severe abd. pain	Duodeno-jejeunal angle	None	de Niord 1958

SUMMARY

1. Rupture of the duodenum is discussed. A blunt trauma of steering wheel injuries is a most historical point.
2. Early diagnosis is difficult because of the absence of the usual free air meniscus or roentgenogram. Five important clinical and laboratory findings are emphasized.
3. Early laparotomy is urged where rupture is suspected because of the high mortality attendant with the so-called "Conservative" nonoperative approach.
4. Techniques of operative procedure are briefly discussed.
5. Two cases are presented.

REFERENCES

1. Butler, E. and Carlson, E.: Pain in Testicle, Symptoms of Ruptural Peritoneal Traumatic Rupture of the Duodenum. Am. J. Surg. 11: 118, 1931.
2. Cottrell, J. C.: Nonperforative Trauma to Abdomen. Arch. Surg. 68: 1956.
3. Johnson, M. L.: Traumatic Retroperitoneal Rupture of the Duodenum: Presentation of a Case and Review of the Literature. Arch. Surg. 38: 372, 1644.
4. Keith, L. M., B. H. Burch: Retroperitoneal Duodenal Rupture Due to Blunt Trauma. Arch. Surg. 69: 81, 1954.
5. Kohn, I. Jr., Hawthorne, H. R. and Frobese, A. S.: Rupture Peritoneal, Rupture of the Duodenum and Non-penetrating Abdominal Trauma. Am. J. Surg. 84: 293, 1952.
6. Miller, R. T.: Retroperitoneal Rupture of the Duodenum by Blunt Force. Ann. Surg. 64: 550, 1916.
7. Pirkle, Q. R.: Traumatic Retroperitoneal Rupture of the Duodenum. Bull. Fulton C. Med. J. 27: 13, 1953.
8. Rothchild, T. P. E. and Hinshaw, A. H.: Retroperitoneal Rupture of the Duodenum Caused by Blunt Trauma with a Case Report. Ann. Surg. 143: 2, 1956.
9. Schumaker, E. E.: Zur Duodenum, Chirurgie Beitr. Klin, Chir. 71: 482, 1910.
10. Strode, T. E., and F. I. Gilbert: Retroperitoneal Rupture of Duodenum Following Non-penetrating Injuries to Abdomen. Arch. Surg. 70: 343, 1955.

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Heart Fund Campaign

Incomplete returns on the Heart Fund Campaign conducted in Virginia during the month of February show a total of $223,556 in contributions, Maj. Gen. John T. Sprague, Waverly, 1959 Heart Fund Campaign Chairman, has announced. This total is $10,875 ahead of the $212,681 contributed as of the same time last year.

The association finances research projects and medical education fellowships at the Medical College of Virginia and the University of Virginia School of Medicine. Also, it joins with the American Heart Association in sponsoring research at other institutions throughout the United States.

Virginia Heart and several of its chapters have given oxygen equipment to rescue squads.

Richmond Area Heart is financing a project that is unique in Virginia. It is the Work Evaluation Unit at the Medical College of Virginia Hospital. This unit tests cardiac patients to determine the work load which they are able to carry. The unit's services are available only to medically indigent patients who are referred by their physicians.

Tidewater Heart in Norfolk is conducting a Rheumatic Fever Prevention program through the public and parochial schools in Norfolk. Also, it supports a blood vessel bank from which surgeons may obtain blood vessels for patients.

Piedmont Heart maintains a register of nurses who are available during off-hours for service to heart patients and makes no charge for this service. The patient pays the nurse a nominal fee.

These are only a few of the community service projects which are sponsored by the Heart chapters throughout the state.

Syncope

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SYNCOPE, more commonly known as fainting, is familiar to all of us in all branches of medicine. It has been defined as "an acute and usually transient bodily state characterized primarily by a sudden and unexpected partial or complete suspension of the functions of locomotion, consciousness and often of circulation and respiration". Usually the episode or episodes are entirely benign. Occasionally, however, the etiologic factors carry a more serious prognosis, or the attacks occur so frequently that they are a real disturbance to the patient. Accordingly, it is important to try and classify these disturbances according to their physiologic and etiologic cause. In this way a more accurate prognosis can be given and proper therapy for more serious underlying causes can be carried out. This paper is intended as a brief review of the subject and will attempt to recall the various types of faints and their physiologic mechanisms.

Fainting attacks may be classified in the following manner:

First, those associated with a fall in blood pressure.

Second, those occurring with a cessation of heart beat.

Third, those due to an insufficient cardiac output.

Fourth, those associated with local changes in the cerebral circulation.

Fifth, those occurring with disturbances in cerebral metabolism.

Sixth, those found during episodes of hyperventilation or overbreathing.

Seventh, those attacks which follow sudden changes in intrapulmonary pressure.

Hysterical faints and epilepsy are also included because they must be so frequently considered in the differential diagnosis.

Syncope due to a fall in blood pressure is most frequently seen in vasovagal syncope, also known as vasodepressor syncope or the common faint. This is the most common form of syncope and is a syndrome with which we are all familiar. This type usually occurs in young people with labile emotions and labile vasomotor systems. The stimulus is usually the upright position plus some painful or emotionally disturbing situation. Frequently there is also a strong factor of suggestion which explains its occasional contagious nature. During a typical attack the victim becomes restless and anxious, then nauseated and sweaty, then lightheaded, and finally will fall unconscious. If he remains upright too long he may convulse. On examination he is pale and sweaty. The pulse is weak, it is usually slow, but may be fast. The blood pressure will be low.

This type of fainting is thought to be due to an unstable vascular system which suddenly dilates, pooling blood in dependent areas away from the brain. The blood is thought by many to be pooled in the splanchnic area. Engle, however, feels most of the blood is pooled in the muscles of the lower extremities. He explains it as part of the fight or flight mechanism. Formerly under painful or frightening situations it was helpful to have large volumes of blood pooled in the muscles of the extremities to help one fight the aggressor or else to aid in flight. Today, in our present state of civilization, one gets in situations in which we can neither fight nor flee. A good example is the apprehensive patient submitting to a venipuncture. This results in pooling large quantities of blood in big muscles without the pumping action of these muscles which are kept at complete rest. This in turn causes decreased return flow to the heart, decreased cardiac output, falling blood pressure and cerebral anoxia.

This type of syncope is also seen due to reflex changes with vaso-dilatation that occur due to carotid sinus pressure. Probably much more common is orthostatic hypotension due to poor tone of vessels of the lower extremities. This is seen as a constitutional defect in some individuals who habitually faint, but more frequently it is seen in patients who get up for the first time after long confinement to bed.

Cessation of heart beat, or cardiac standstill occurs due to various stimuli from various parts of the body which interfere with the conduction system of the heart. This may be manifested in the electrocardiogram as sinus arrest, sinoauricular block, or auriculoventricular block. The end result is the same —failure of the heart beat, usually temporary, re-

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sulting in cerebral ischemia and a faint. This may occur with organic heart disease such as the familiar Stokes-Adams attacks due to A-V nodal block. Also this may occur reflexly as seen in carotid sinus syncope. Here stimuli are carried by the vagus nerve from the carotid body to the heart. It also accounts for some of the fatal cases of coronary occlusion when strong vagal impulses are carried from the heart along the efferent fibers and back to the heart along the efferent fibers of the vagus nerve. Reflex vagal impulses from other viscera such as abdominal organs and the pleura can give temporary or permanent asystole. The occasional faint or rarely death while doing a simple pleural tap is due to this mechanism. Preliminary use of atropine routinely will help to avoid these accidents. Atropine is useful in acute coronary thrombosis for the same reason.

Insufficient cardiac output is a serious type of faint. People with aortic insufficiency or stenosis and those with some types of congenital heart disease have a poor cardiac output, but get by with limited activity. When they overstep their limitations their output is not enough to take care of the extra demands of the body as well as the needs of the brain. The result is cerebral ischemia and syncope. The same sort of thing may occur with the paroxysmal tachycardias. Also patients with coronary artery disease have definite limitations on their cardiac output and cannot compensate for over-exertion. As a result they too are subject to faints. This brings up serious diagnostic problems when our coronary disease patients faint. Is this cerebral ischemia due to poor cardiac output, is this syncope due to asystole resulting from a vagovagal reaction from a fresh infarction, or is this a transient paroxysmal tachycardia due to an unstable ventricle or even again a fresh infarct? These are usually snap diagnoses which have to be made in the home by the family physician, and I suppose are usually made by instinct as by the time the patient is seen, all the signs have passed. A correct analysis will save the patient an unnecessary trip to the hospital or may uncover a painless coronary thrombosis.

Cerebral circulatory disturbances can cause faints without cessation of heart beat or fall in blood pressure, although changes in the pulse and blood pressure do occur at times. This is mostly seen in arteriosclerotic brain disease. We are repeatedly called to see these people because of transient losses of consciousness. We are never sure whether they have had another little stroke or thrombus, whether this is the warning sign of a major stroke, or whether this is simply a faint without further organic brain changes. These distinctions are mostly academic as therapeutically we have so little to offer; however, it is important to be able to advise the patient and family as to what is possibly going on. Also recent work on long term anticoagulant therapy as prophylaxis against strokes should heighten our interest in these episodes.

Disturbances of cerebral metabolism frequently are manifested by faints. Severely anemic patients are subject to syncope. Poisonous fumes of various sorts cause losses of consciousnes. Spontaneous hypoglycemia and the hypoglycemia associated with an excessive dose of insulin are other examples.

Hyperventilation causes changes in the acid base balance of the body which may in turn cause changes in cerebral metabolism and disturbances of consciousness. These people may also have a vasodepressor type faint superimposed on the other cerebral disturbance.

Sudden changes in intrapulmonary pressure can interfere with the return of blood from the right chamber of the heart to the left and lead to inadequate leftsided output, cerebral ischemia and syncope. This is seen in the rare condition known as Tussive Syncope. In this situation the victim faints during paroxysms of coughing. Hysterics sometimes faint while straining against a closed glottis and children at times play a game of causing each other to faint by a sudden sharp squeeze about the chest while holding a deep inspiration.

Hysterical faints are psychic rather than physiologic disturbances of consciousness. They can so closely mimic a real cerebral ischemia that it takes careful study to avoid being fooled. It should be remembered that this should be a positive diagnosis rather than simply exclusion of an organic process.

Epilepsy is not a true faint but is mentioned here because it so frequently must be considered in the differential diagnosis. Careful observation or a careful history will usually suffice, but typical changes on the electroencephalogram are conclusive. Unfortunately 15% of epileptics have normal E.E.G.'s and 15% of normals or non-epileptics have abnormal E.E.G's. Narcolepsy may have to be ruled out, especially those who collapse during fits of laughter.

The diagnosis of syncope is usually fairly simple but at times may be quite difficult. A careful history will usually suffice to make the diagnosis. In fact the patient has usually recovered before he can be seen and therefore the history is all one has on

which to go. The physical is usually normal, but one looks for flushing, sweating and other evidences of an unstable vasomotor system. The carotid sinuses can be examined at this time with the patient lying down and checking one side at a time. The heart is examined for disturbances of rhythm and for evidences of myocardial or valvular disease. The blood pressure may be checked with the patient lying down and also standing. Having the patient reproduce his symptoms by overbreathing may be helpful diagnostically as well as therapeutically. These are all simple procedures and can be done quickly and easily in the office. Other helpful procedures are the electrocardiogram, hemoglobin determination, glucose tolerance test and, at times, an electroencephalogram. The following brief case reports will illustrate some of these points.

Case No. 1: (W.B.B.) A forty-seven year old executive was seated at his desk during a conference when he was suddenly seized with excruciating pain in the right lower chest anteriorly. This pain lasted but a matter of seconds before he fainted. When he recovered consciousness, within a matter of minutes, the pain was gone. Physical examination a half hour later revealed a normal pulse and blood pressure. The heart sounds were of good quality and the rhythm was perfectly regular. Electrocardiogram was negative. There was no past history of syncopal attacks and no past history of heart disease. He had had annual physical examinations in our office on five occasions prior to the attack, and on three occasions since the attack. He has always been found to be in good health and his electrocardiograms have never shown anything but a tendency to sinus bradycardia. There is nothing to suggest coronary artery disease.

This patient presented an interesting diagnostic problem when first seen. He apparently developed transient cardiac standstill due to a strong vagal reflex from some viscera. Because of his age, the possibility of a vago-vagal reflex from his heart secondary to acute infarction had to be considered. However, the character of the pain suggested that some organ other than the heart was involved. Severe pylorospasm was a possibility. The lack of E.K.G. changes and his subsequent course have tended to support this impression. This man has, however, been rated up for insurance as a probable myocardial infarction. This points up the importance of trying to make an accurate diagnosis. In this case, unfortunately, the diagnosis is purely speculative.

Case No. 2: (W.G.) This 34 year old bank employee was examined in the office because for the previous three months he had been having syncopal attacks. The attacks were characterized by a feeling of heat, followed by sweating, then lightheadedness and finally extreme weakness and nausea. Sitting down and drinking water would give some relief and within a few moments the attacks would pass off. The general physical examination and routine laboratory studies were all normal. Because the attacks occurred in the midmorning, a glucose tolerance test was done and this showed a typical hypoglycemic curve with a fall of the three hour blood sugar below 50 mgm.% A high protein diet with in-between meal feelings has given relief of his symptoms. These attacks in many respects suggested the vasodepressor type of syncope and points out the similarities in the symptoms of these two conditions.

Case No. 3: (O.T.) A forty-five year old woman has been under treatment for the past four or five months for exertional dyspnea and substernal oppression. Two weeks previously she began to develop "black out" spells. During these episodes she would fall, if standing, breathe rapidly, become numb all over, and her hands and feet would be drawn up in carpo-pedal spasm. Smelling salts would revive her. Except for obesity, the physical examination was negative. E.K.G. showed slight lowering in the T waves in leads 1 and AVL. Otherwise the tracing was normal. While under observation in the hospital, she had several of her attacks. These were manifested by anxiety, faintness and breathlessness. A blood sugar drawn during an attack was 113 Mgm.%. An E.K.G. done while she was having symptoms revealed the development of negative T waves and ST depression in leads 1, 2, AVF and the F leads—quite characteristic of coronary insufficiency.

We interpreted this case as having a dual cause for the fainting spells. The first cause was cerebral ischemia associated with decreased cardiac output secondary to coronary artery disease. Secondly, anxiety in regard to herself had led to overbreathing and faintness associated with the hyperventilation syndrome. There are also reports of T wave and ST segment changes in the EKG of normal hearts with hyperventilation. It is possible, therefore, that this patient does not have heart disease and that the E.K.G. changes are all related to overbreathing. Further E.K.G. studies during quiet respiration, during voluntary over-breathing, and before and after exercise may help to clarify the diagnosis.

In summary the physiologic mechanism and the

diagnostic approach to fainting has been reviewed. Several cases have been presented to illustrate some of the problems involved. All too frequently a definite diagnosis cannot be made, but familiarity with the physiology involved and careful study will lead to the most satisfactory management of the case. The most important diagnostic tool is a careful and detailed history.

BIBLIOGRAPHY

Engle, G. L.: Fainting. Charles C. Thomas, Springfield, Ill. 1950.

Weiss, S.: Oxford Medicine. Oxford University Press, New York. 1936. Vol. II, Part 1, p. 250(9).

Logue, R. B., Hanson, J. L., and Knight, W. A.: Am. Heart J. 28: 574, 1944.

Blanton, W. B. and Blanton, H. W.: J.A.M.A. 76: 1220, 1921.

Lewis, B. I.: J.A.M.A. 155: 1204, 1954.

Thompson, W. P.: Am. Heart J. 25: 372, 1943.

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Foot Care Rules

By using his head, a person can save his feet, his posture, his disposition, and maybe even his general health. Foot troubles are unnecessary, but many people have them—usually because they "abuse their feet unmercifully." Some tips on foot care are listed in the March Today's Health, published by the American Medical Association.

Heels on shoes are a major source of foot trouble. One New York orthopedist has observed that a woman's foot troubles begin when she starts buying shoes in the woman's department.

The article recommended that heels be no higher than one and one-half inches; that shoes have plenty of toe space to prevent cramping, and that they fit snugly to give support.

Shoes should be purchased late in the afternoon, since feet swell during the day and are slightly larger at that time. Shoes should never be bought by size; the feet should always be measured.

Extreme care should be taken in buying shoes for children. Hand-me-down shoes should be avoided since they never fit properly. Children's feet grow at "an astonishing rate." On the average a child will outgrow a pair of shoes in three months. The shoe should be three-fourths of an inch longer than the longest toe. Leather shoes are best, but canvas shoes are all right for playing, provided they are not worn constantly.

The article also said:

—Corns are simply masses of dead skin cells with a sensitive core, caused by excessive rubbing. Cutting corns is not advisable and neither is the use of drug store corn removers. The safest home treatment is a simple non-medicated moleskin plaster, which will lessen pressure and pain. A well-fitting shoe, however, is the best corn remover.

—Bunions result when toes are cramped and the ends of the bones next to the toes thicken causing heavy calluses to form. At times, the condition becomes serious enough to require surgery. A long course of exercises may restore normal function.

—Ingrown toenails occur when the toes are cramped and the nails are improperly cut. They should be cut straight across.

—Athlete's foot is usually a minor nuisance. If it occurs, the feet should be washed daily and dried thoroughly. It is vitally important to keep the feet dry. Boric acid foot powders help, and so does ordinary talcum.

—Some footaches can be traced to poor circulation. Propping the foot up on a desk or table from time to time will help relieve the pain.

"If your feet hurt, go to a specialist: an orthopedist who is medically trained. If your foot ailments are minor, temporary relief may be provided by a chiropodist or podiatrist."

The article was written by John Frazier, New York.

Chondromyxoid Fibroma of Bone

Report of Case

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CHONDROMYXOID FIBROMA of bone, a benign lesion, was initially described by Jaffe and Lichtenstein[1] in 1948, who described eight cases at that time. Since then, several additional cases have been reported in the literature. Undoubtedly, other cases of this unusual tumor have been seen, but not reported. Lichtenstein believes the tumor has been erroneously described in many instances as an enchondroma or myxoma or their malignant counterparts. The lesions are also believed to be erroneously diagnosed as a chondrosarcoma. The lesion is entirely benign, however, and responds well to curettage with or without bone grafting depending on the size of the lesion. Histologically, the tumor shows spindle or multipolar connective tissue elements lying loosely in a stroma of myxoid intercellular matrix. As the tumor matures, the matrix undergoes considerable collagenization. Many fields of the tumor may simulate cartilage tissue tumor. The appearance of many cells showing atypical nuclei formation explains the mistaken over diagnosis as a chondrosarcoma. The following case is reported as another case of this unusual tumor.

P. H. A fourteen year old, colored male was first seen in February 1958, because of pain in the left knee of three months duration. Gradual enlargement of the upper tibia had reportedly begun two years previously but had not been painful until approximately one month prior to the hospital admission. The onset of pain had also been associated with gradual increase in local heat over the upper tibia. The patient had been treated for active rheumatic fever for two years prior to the onset of the present symptoms. X-rays (Figs. 1 and 2) of the left leg revealed a cystic lesion involving the upper metaphyseal region of the tibia which had extended to the epiphyseal plate both medially and posteriorly.

Physical examination was negative except for a soft, blowing systolic murmur in the fourth left interspace and a slightly tender, non fluctuant, firm enlargement of the anterior and medial aspects of the left upper tibia. All laboratory examinations were within normal limits including serum calcium, phosphorus, and alkaline phosphatase. A clinical diagnosis of fibrous dysplasia of the tibia was made. It was planned to curette the lesion and pack the cavity with autogenous cancellous bone. At operation on April 4, 1958, the cortex of the tibia on the medial aspect was fenestrated through an opening 3 x 2 cms. The periosteum over the medial aspect was thicker than normal but was stripped from the underlying cortex without difficulty. On opening the cortex



Fig. 1. X-ray (AP) of upper left tibia showing cystic like lesion involving upper metaphyseal region.

it could be seen that the metaphyseal region was filled with a thick, gelatinous material of a dull amber color with many irregular areas of deep red discoloration. The gelatinous material was easily removed with a large curette. A large amount of

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Fig. 2. X-ray (lateral) showing extension of lesion to involve posterior cortex of tibia.

the gelatinous globular material was submitted for frozen section, and a tentative diagnosis of "possible chondrosarcoma" was returned. While waiting for the frozen section to be returned, the previously removed autogenous bone graft from the left ilium had been cut into small fragments and was packed into the cavity of the tibia since the lesion appeared to be benign at operation. After receiving the pathological report of possible malignancy, however, it was decided to do no further definitive treatment until permanent sections from the tumor could be prepared and reported. Fortunately, the permanent sections were reported as showing a typical chondromyxoid fibroma. The sections (Figs. 3 and 4) showed a chondroid matrix with many cartilagenous cells scattered in the lacunar spaces. The tumor cells were stellate with many large star nuclei. The cartilagenous matrix merged with eosinophilic fibrous areas of which the tumor cells were spindled shaped. The slides were kindly reviewed by Dr. Lent C. Johnson of the Armed Forces Institute of Pathology who concurred in the diagnosis of a chondromyxoid fibroma. The patient did well following surgery and the subsequent x-ray films showed the cavity to have been obliterated by the bone graft with subsequent solid healing of the cavity. The patient has had no further symptoms referable to his leg and is ambulatory without assistance at this time.

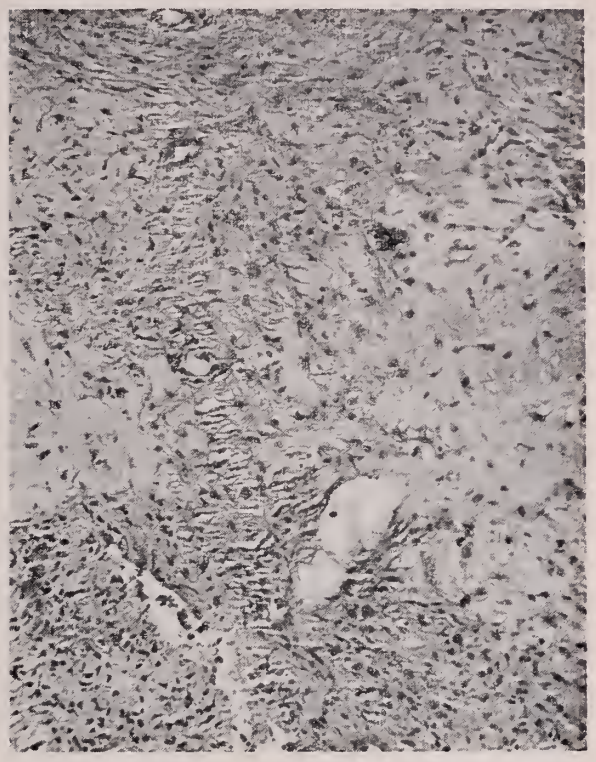


Fig. 3. Photomicrograph (X25) note presence of both cartilagenous and fibrous matrix.

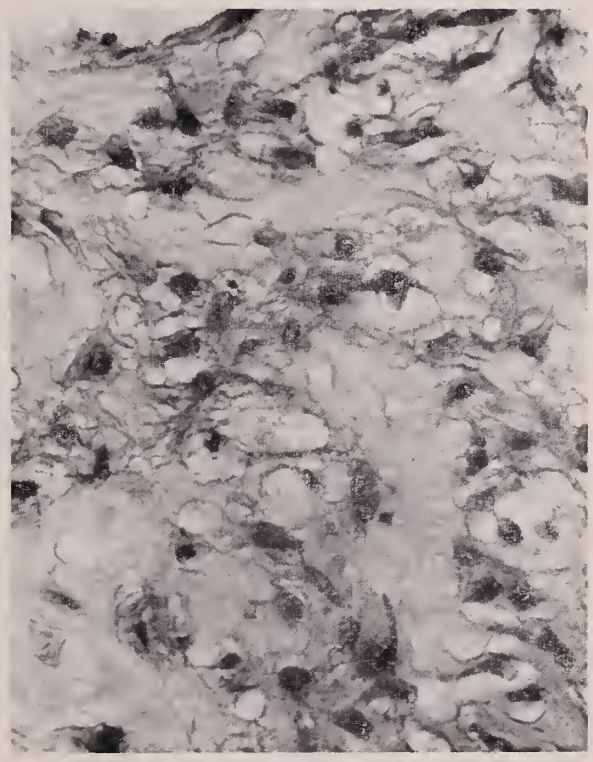


Fig. 4. Photomicrograph (X400) note stellate tumor cells with irregular nuclei.

Bibliography

1. Jaffe, H. L., Lichtenstein, L.: Chondromyxoid Fibroma of Bone; A Distinctive Benign Tumor Likely to be Mistaken Especially for Chondrosarcoma, Arch. Path. 45: 54, 1948.
2. Lichtenstein, L.: Chondromyxoid Fibroma of Bone (Abstract, Am. J. Path. 24: 686-687, 1948).
3. Lichtenstein, L.: Bone Tumors, 62-7, C. V. Mosby, 1952.

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Emotional Illness

A new approach to the treatment of emotional illness has been suggested by two New York psychoanalysts. They believe that many emotional illnesses are at least partly the result of a person's "quest for certainty". The neurotic behavior represents a means of obtaining certainty.

Most neurotic persons repeat their behavior over and over; they are certain of its outcome and refuse to risk trying a new approach to their problems.

Nearly all the categories of emotional illness may be interpreted as resulting from a quest for certainty, Emanuel K. Schwartz, Ph.D., and Alexander Wolf, M.D., said in the January Archives of Neurology and Psychiatry, published by the American Medical Association.

For example, the schizophrenic person withdraws from the threatening environment to the security of his own internally remade world; the depressed person feels that if he withholds all criticism, anger, and aggression, he will be certain not to provoke or to incur the dangers of the hostile and destructive forces around him.

The perfectionist feels that if he is perfect, if he is certain to make no mistakes, he cannot be punished or endangered. Even the hypochondriacal person uses his pills as a way of finding certainty. By taking them, he is certain that he can get through the day.

By approaching such patients through the concept of the search for certainty, psychotherapists may be able to help some patients toward a more healthy mental state.

The "quest for certainty" is tied up with an individual's ability to assess the probabilities of success or failure and safety and danger in a situation and his willingness to take risks. A person with a healthy mental state is willing to take risks—sensible risks based on a realistic appraisal of the situation. He develops a certainty of what he can and cannot do, but also recognizes that absolute certainty is an impossibility. Persons who refuse to take many risks are often persons who demand absolute certainty as shown by the outside situation or by a "feeling inside." They are unable to recognize that most situations present risks and uncertainties.

The quest for cetainty may be viewed as a person's attempt to cope with the anxiety that is always present when there is an unknown factor. The anxiety is a warning of possible danger. When the normal person is warned, he must evaluate the nature of the danger in terms of what is really there and what his chances are of managing it. However, the neurotic does not do this. He has an unreal impression of the situation. He deals with a situation on the basis of his own ideas—not on the basis of observation and careful weighing of the real chances of success and failure. He must be certain according to his own concepts and not according to reality.

"Whenever all doubts are denied and all differences obscured, we face pathologic consequences. Realistic psychologic certainty is all a little uncertain; of this we may be certain."

Dr. Wolf is a member of the staff of the New York Medical College and Dr. Schwartz is on the staff of the Postgraduate Center for Psychotherapy, New York.

Convulsive Seizures under Promazine Medication

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THE USE OF PHENOTHIAZINE derivatives as neuroleptic drugs has increased tremendously during the last two years and they are now prescribed very frequently in general medicine as well as in psychiatry. The number of side effects of these drugs has increased with their wider use, indicating that they are exerting a rather profound influence on the human organism. Recent publications have shown that convulsive seizures (grand mal type) can occur for the first time in patients who were not known to have such seizures previously. Voegele & Ruprecht[1] reported the occurrence of convulsions for the first time in two patients on Promazine therapy. These occurred on daily dosages of 800 mg. and 1500 mg. and the electroencephalogram was found to be normal four and ten days after the seizure.

Rudy & Himwich[2] reported the first occurrence of grand mal seizures in seven patients of a group of 26 mentally defective females. In five of these the convulsions occurred on Promazine only. In the other two cases the patients had had seizures on other Phenothiazine preparations as well.

In our own material of over 1000 cases treated with different neuroleptic agents, we observed the first occurrence of convulsions in two of our 715 cases treated with Chlorpromazine, one of 143 cases on Prochlorperazine and four of the 60 cases on Promazine. Promazine is less effective than Chlorpromazine in control of psychotic symptoms and higher dosages are therefore necessary to achieve the same therapeutic effect.

The following brief description of our four cases. including electroencephalographic findings, indicate that three of these cases had some kind of brain pathology before Promazine treatment was started.

CASE REPORTS

Case #1 G.M., a 49 year old housewife, was first admitted to this hospital in 1940 with the diagnosis of schizophrenia, catatonic type. She had several remissions during which she received electroshock therapy and had prolonged trial visits at home. She received Chlorpromazine treatment in July 1955, during which she showed marked Parkinsonism. We have no base line electroencephalogram prior to neuroleptic therapy, but during and two weeks after her Chlorpromazine treatment she had an abnormal electroencephalogram with sharp waves in all leads. This patient was placed on Promazine treatment in an attempt to control her hyperactivity, destructiveness and combative behavior. Promazine was chosen in order to avoid a recurrence of the Parkinsonian symptoms, starting with 150 mg. on 3/9/56, 400

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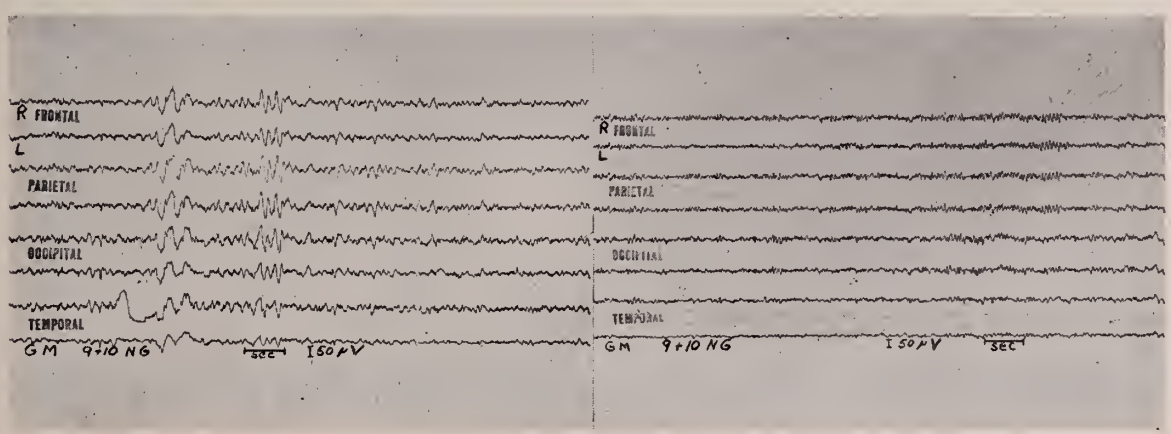


Fig. I.

A. Recording taken immediately after last generalized seizure—high voltage paroxysmal slow waves seen in all leads.

B. Recording taken two months after last generalized seizure displays fast activity in all leads.

mg. on 3/10/56 to 3/12/56, 1,100 mg. on 3/13/56, 1,500 mg. on 3/14/56, 1,350 mg. on 3/15/56 and 3/16/56, 1,600 mg. on 3/17/56 and 3/19/56, 1,900 mg. on 3/19/56, 2,000 mg. on 3/20/56 on which date she had two grand mal seizures with tongue biting, incontinence and convulsive movements of head and extremities for several minutes. She was placed on Dilantin and her Promazine medication was continued with 2,000 mg. on 3/22/56 to 3/24/56. On 3/25/56 the patient received 1,500 mg. of Promazine. She had another convulsion in spite of Dilantin medication and the Promazine treatment was discontinued. She received, altogether, 21,750 mg. of Promazine over a period of 16 days. The patient's electroencephalogram showed generalized paroxysmal cerebral dysrythmia on 3/26/56, one day after her last seizure. The patient had no more convulsions after discontinuation of drug therapy and her psychotic condition remained unchanged. A follow up electroencephalogram on 5/23/56 revealed low voltage fast activity, but no seizure activity.

Case #2 I.H., a 53 year old housewife, was admitted in 1948 with diagnosis of schizophrenia, paranoid type. She was continually disturbed, restless, combative and destructive. She did not respond to electroshock therapy. A transorbital leucotomy was performed in January 1952, resulting in some transient improvement. No convulsions were noted following the operation. The patient received Chlorpromazine from May 1954 to January 1955 and showed some improvement. In June 1956 she again relapsed and was treated with Promazine receiving 550 mg. i.m. on 6/23/56, 600 mg. i.m. on 6/24/56 and 6/25/56, and 800 mg. p.o. on 6/26/56. On 6/27/56 she received 600 mg. p.o. and had a grand mal seizure during which she suffered a laceration on the back of her head. She had received 3,150 mg. of Promazine during a five day period. Neuroleptic treatment was discontinued and she did not have any further seizures. Her psychotic symptoms remained unchanged. This patient's electroencephalogram revealed a normal routine and sleep recording on 10/13/55. It showed generalized paroxysmal cerebral dysrythmia on 6/28/56, one day after her seizure. A follow up electroencephalogram on 12/10/56 was normal for both routine and sleep record.

Case #3 F.L., a 30 year old single female patient, was first admitted to this hospital in 1946 and readmitted in 1951 with diagnosis of schizophrenia, paranoid type. She improved with electroshock therapy and went out on trial visit on several occasions, but showed a tendency to relapse every few months. The patient received Chlorpromazine treatment in 1954 and seemed improved. She relapsed a few months later and a transorbital leucotomy was performed on 12/4/54. No seizures were noted after the operation and the patient's condition was improved. She relapsed again in 1955 and was put on Chlorpromazine treatment, again with temporary improvement.

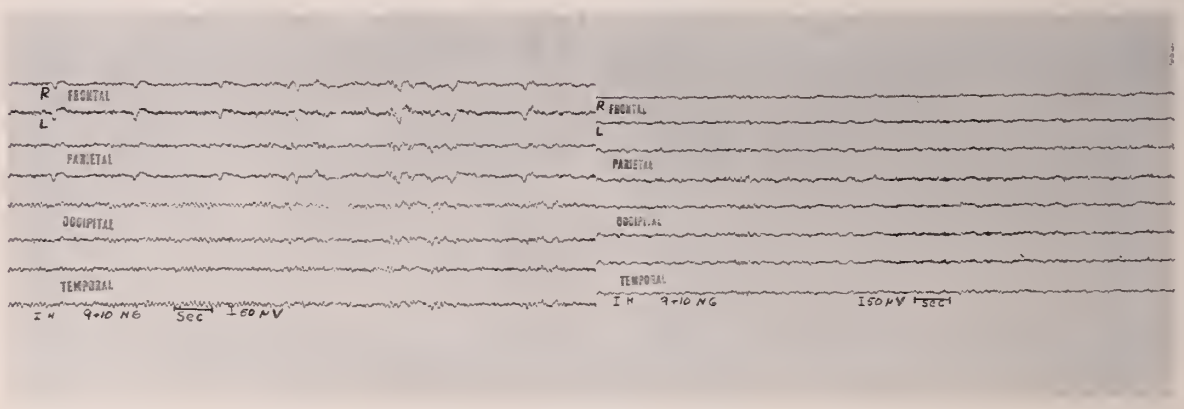


Fig. II.

A. Recording displays normal alpha activity. Recording taken at time of admission into hospital. Same activity seen six months after last generalized seizure.

B. Recording taken one day after generalized seizure shows paroxysmal fast activity in all leads.

In March 1956 the patient was put on Promazine receiving 50 mg. on 3/9/56, 100 mg. on 3/10/56, 400 mg. on 3/11/56 and 3/12/56, 700 mg. on 3/13/56, 800 mg. on 3/14/56 to 3/18/56, 1,100 mg. on 3/19/56, 1,200 mg. on 3/20/56 and 1,400 mg. on 3/21/56.

On 3/21/56 she had two grand mal seizures and her treatment was discontinued. She had received 9,350 mg. Promazine over a period of 12 days. This patient's electroencephalogram on 11/22/54,

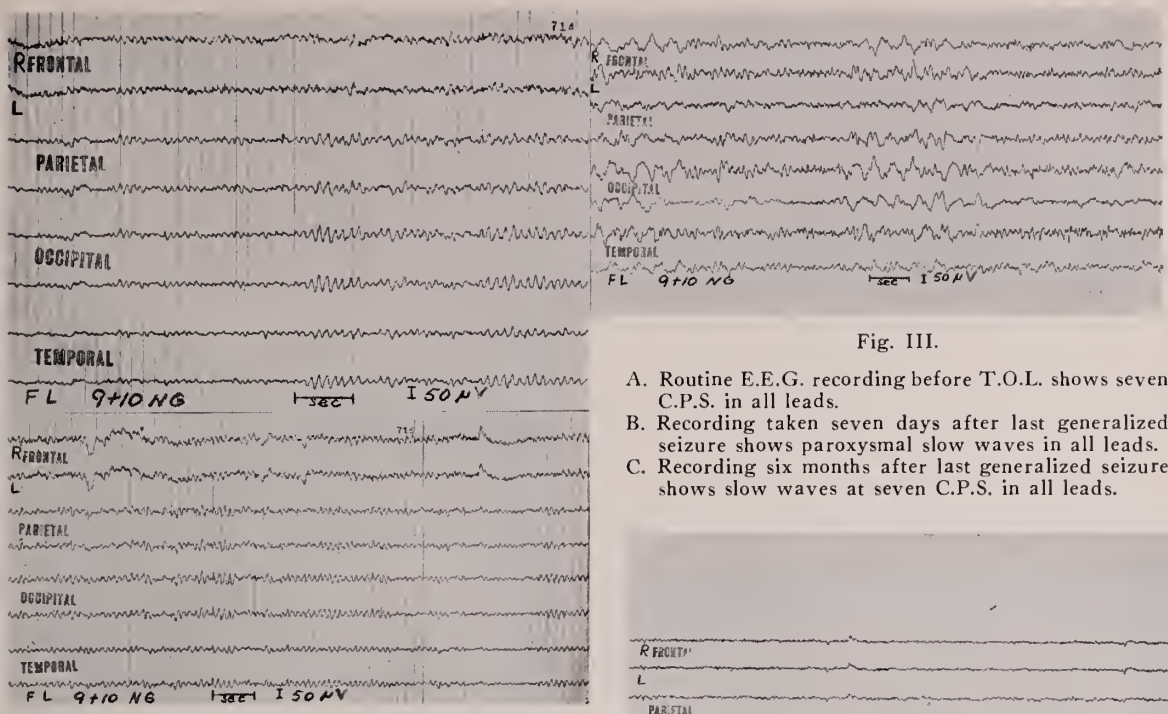


Fig. III.

A. Routine E.E.G. recording before T.O.L. shows seven C.P.S. in all leads.
B. Recording taken seven days after last generalized seizure shows paroxysmal slow waves in all leads.
C. Recording six months after last generalized seizure shows slow waves at seven C.P.S. in all leads.

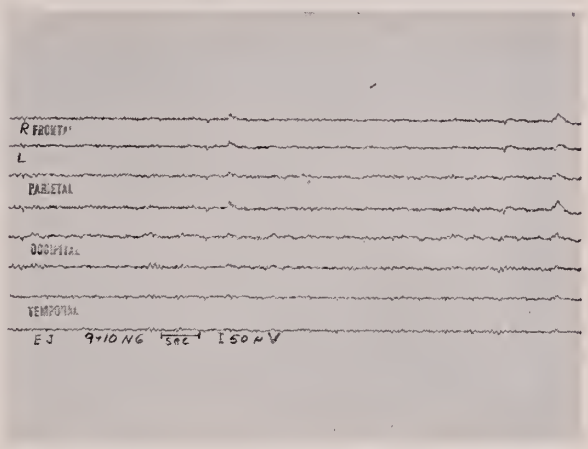


Fig. IV.

A. Routine 16 lead E.E.G. shows fast activity at 30 C.P.S. in all leads.

prior to the transorbital leucotomy, revealed generalized slowing particularly on hyperventilation. An electroencephalogram on 3/28/56, seven days after her seizure with Promazine, showed 2 to 3/sec. slow waves in all leads and generalized paroxysmal cerebral dysrythmia. A follow-up electroencephalogram on 5/28/56 revealed slowing and seizure activity. On a second follow-up, on 12/12/56, there was generalized slowing without seizure activity.

Case #4 E.J., a 16 year old girl, was admitted to this hospital in 1954. Her diagnosis was schizophrenia, paranoid type. She had periods of severe excitement with destructiveness and aggressive behavior. She did not respond favorably to electroshock therapy and a course of Chlorpromazine which she received in 1955 had very little effect.

This patient was treated with Promazine in June 1956, receiving 600 mg. from 6/1/56 to 6/6/56, 700 mg. on 6/7/56, 750 mg. from 6/8/56 to 6/10/56, 850 mg. on 6/11/56, 900 mg. on 6/12/56, to 6/19/56, 1,300 mg. on 6/20/56, 1,500 mg. 6/21/56 to 6/26/56, and 1,950 mg. on 6/27/56 to 7/1/56. On this date she had a grand mal seizure with biting of her lips. Promazine treatment was discontinued. Over a period of 30 days she had received a total of 32,900 mg. of Promazine. An electroencephalogram on 7/2/56 showed fast activity due to the drug. No further studies could be done because the patient was uncooperative.

DISCUSSION

In our series of 60 cases treated with Promazine we observed grand mal seizures for the first time in four patients, an incidence of 6.6%. This incidence is high in comparison with that of other tranquilizing drugs. The occurrence of these convulsions indicates that Promazine can not be considered to be of milder pharmacological action than the other Phenothiazines. Relatively high dosages of Promazine were required because of its lesser potency in comparison with the other tranquilizing drugs. Previous reports in the literature stated that seizures occurred under Promazine for the first time in cases without evidence of previous brain damage. Two cases of our series had known injuries to the brain due to transorbital leucotomy. Of the other two cases, one had shown electroencephalographic abnormality while on Chlorpromazine. In earlier studies Shagass[3] has demonstrated that this drug did not

produce any consistent changes in the electroencephalogram even with intravenous application. The last case did not have any pretreatment electroencephalogram and we have no history of brain damage. In this case the electroencephalogram revealed only fast activity due to the drug, but no seizure activity after convulsions. No further tests could be done because the patient remained uncooperative. Therefore, for lack of other evidence we would consider this a case in which a seizure occurred under high Promazine medication without previous brain pathology. In all four cases no further convulsions were observed after discontinuing Promazine, and the seizure activity in the electroencephalogram disappeared (though it was still present two months after the seizure in one case).

Our findings led us to the following hypothesis as a possible explanation for the occurrence of grand mal seizures under Promazine medication. Patients with brain damage show facilitation of seizure mechanisms under the influence of drugs, like Metrazol, and also with hypoglycemia. The release of acetylcholine in damaged brain tissue has been believed to be responsible for this type of seizure. Forster[4] found that "electrical discharges of the cortex produced by acetylcholine were similar to seizure discharges." He concluded that "because of these observations and the normal presence of acetylcholine in the cortex, the view is taken that acetylcholine plays an essential role in the physiologic genesis of epilepsy."

Jasper[5] discusses the epileptogenic effects of acetylcholine and the convulsant action of strong anticholinesterases, and refers to the work of "Tower and Elliott[6] who found defective mechanisms for binding acetylcholine in epileptic lesions, thereby allowing too much to be liberated in the free form." A high concentration of Promazine in the organism may cause suppression of anticholinesterases or liberation of acetylcholine in the brain tissue of patients who are predisposed to this process by previous brain damage. It is therefore important to investigate the possibility of pre-existing brain damage in all cases of convulsions with Phenothiazine medication, before one can conclude that the seizures are due to a specific epileptogenic quality of the drug itself. It is also important to examine the patients and survey their history for previous brain pathology before placing them on Phenothiazine derivatives, in order to avoid such untoward reactions as the occurrence of convulsions.

SUMMARY

In four of sixty patients treated with Promazine, convulsive seizures (grand mal type) were observed for the first time. The electroencephalographic findings are described and a neurophysiological mechanism which may be responsible for the production of these seizures is disussed.

References

1. Voegele, George E. and May, Ruprecht H.: Epileptiform Seizures Under Promazine Therapy: Occurrence in Two Cases Without History of Former Seizures. Am. J. Psychiat. 113: 655, Jan. 1957.
2. Rudy, L. H., Himwich, H. E. and Rinaldi, Franco: Clinical Evaluation of Psychopharmacological Agents in the Management of Disturbed Mentally Defective Patients. Soc. Biol. Psychiat. XI: 48-49, 1956.
3. Shagass, C.: Effect of Intravenous Chlorpromazine on the Electroencephalogram. EEG Clin. Neurophysiol. 7: 306-308, 1955.
4. Forster, Frances M.: Action of Acetylcholine On Motor Cortes. Arch. Neurol. & Psychiat. 53-54: 391-394, 1945.
5. Penfield, Wilder and Jasper, Herbert: Epilepsy and the Functional Anatomy of the Human Brain. 217-219, 1954.
6. Tower, D. B. and Elliott, D. A. C.: Activity of Acetylcholine System in Heman Epileptogenic Focus. J. Appl. Physiol. 4: 669-676, 1952.

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Antimalarials in the Treatment of Rheumatoid Arthritis

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THE PURPOSE of this paper is to give some experiences in the use of antimalarials in the treatment of rheumatoid arthritis. This systemic disease is still of unknown etiology and the cure for this condition has not been found.

Time honored principles in the treatment of rheumatoid arthritis should not be forgotten. Aspirin is still the drug of choice in treating mild cases. Butazolidin is an excellent anti-arthritic drug and if used with the proper precautions has little in the way of adverse reaction.[1] Cortisone and other steroids have been used extensively and, like aspirin and Butazolidin, seem to have a nonspecific anti-inflammatory effect. The steroids, when used in large doses over a long period, seem to leave the patient in a worse condition. In the long run, the arthritis returns in full force, dosage must be increased to maintain benefit and the side effects are often devastating or fatal. The doctor who routinely uses steroids as a first drug in treating arthritis is medically procrastinating and should change his approach.

Gold is still used extensively in many good arthritic clinics and, even though such prominent rheumatologists as Bauer and Ragan[2] are not impressed by its long term value, will probably continue to be used. Gold is slow to act, occasionally toxic, expensive to administer, and necessitates a long series of injections and requires repeated blood counts and urinalyses with each injection. There may be some relationship between the action of antimalarials and that of gold.

HISTORY AND MODE OF ACTION

The use of antimalarials in treating rheumatoid arthritis is relatively recent. In 1949, Dr. G. G. Haydu[3] postulated that quinine and the related drugs should be of help in inhibiting the high level demands for adenosine triphosphate (seen in rheumatic diseases) by reason of their power to inhibit adenosine triphosphatase (as do gold and copper salts). He later, in 1953[4], followed up his hypothesis by showing definite improvement in a series of 28 patients receiving Chloroquine 0.5 gram three times a week for six months. This theory, by the way, seems to be the only tenable hypothesis for the action of antimalarials in rheumatoid arthritis.

In 1951, Dr. Page[5] of Middlesex Hospital, London, reported the treatment of 18 cases of lupus erythematosis with Atabrine. Only one failed to be improved. Dr. Page noted that two of these patients had the joint manifestations of rheumatoid arthritis and that these two patients were completely relieved of their arthritis. This latter article stimulated the interest of other physicians in the use of antimalarials in treating rheumatoid arthritis and a number of reports have followed.[6,7,8]

Primaquine[9], an 8-Aminoquinilone derivative, is reported as being too toxic for practical use. Atabrine and Chloroquine are 4-Aminoquinilones. Atabrine has also proven toxic, occasionally causing agranulocytosis and severe exfoliative dermatitis and this drug has been largely replaced by Chloroquine. Chloroquine is similar to Atabrine in structure but does not have a benzene ring in its nucleus and seems to produce little or no serious toxic effects.

CASE REPORTS

My interest in antimalarials began in 1954 while working at the University of Virginia Hospital. I was impressed with their effectiveness in several cases and therefore have continued my interest since becoming associated with the McGuire Clinic and St. Luke's Hospital. A number of patients at the McGuire Clinic have been treated with these drugs by me and by my associates. I wish to report on five of these at this time.

Case No. 1. A.P.J., a 60 year old lady, was well prior to Christmas of 1956 when she developed pains in her left shoulder and arms. Six weeks later she developed typical inflammatory rheumatism in the metacarpophalangeal joints of the right index finger, middle fingers and thumb. In August of 1957 she

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developed swelling and tenderness of the left wrist followed by pain and stiffness in her knees and lateral bunion joints and the right wrist. Initial examination in September of 1957 showed typical changes of rheumatoid arthritis, mild anemia, increased sedimentation rate and infection of the right antrum. Removal of the infection caused a temporary remission but on October 31st there was a return of temperature with swelling and tenderness of the wrists and weakness of the hands. The patient was admitted to St. Luke's Hospital and treated with transfusions and started on Chloroquine 250 mgs. per day. On November 27th all evidence of inflammation had disappeared. The patient had a coarse tremor which was thought possibly due to Chloroquine but this had disappeared by December 16. The patient was last seen in October 1958 and was completely asymptomatic as far as arthritis was concerned. She continues on Chloroquine.

Case No. 2. Mrs. E.C.M. was a 58 year old lady who was first seen in June of 1956. She had had typical rheumatoid arthritis for ten years with fever, anemia and extreme weakness. She usually took six Empirin tablets per day and had had Cortisone for two months prior to being seen, without benefit. Initial treatment consisted of hospitalization, Butazolidin and Atabrine 100 mgs. three times a day. She was also given two blood transfusions and packed red blood cells. On September 20, 1956, the patient was asymptomatic as far as arthritis was concerned, on 100 mgs. of Atabrine per day. The patient was again seen in April 1957. She had stopped Atabrine one month prior to being seen and had return of the activity of arthritis. Atabrine was re-instituted with control of symptoms. In the spring of 1958 the patient was switched to Chloroquine 250 mgs. a day and in October 1958, the patient had no symptoms of rheumatoid arthritis, and had pains only related to permanent joint damage. She was still anemic.

Case No. 3. L. H. is a 47 year old colored lady who first was seen by me in February 1957. She first developed rheumatoid arthritis in 1946 with fever, swelling, redness, heat and tenderness in her right ankle. She had a remission until 1951 when there was involvement in the right hip and back and the patient has never been well following this. For the year prior to being seen she was helpless. She had trouble with hips, back, hands, wrists, elbows, shoulders, neck and knees. She had taken primarily aspirin and Cortisone, but felt that Cortisone eased her pain but upset her stomach. Examination showed typical changes of rheumatic arthritis, including nodules on the elbows over the proximal portions of the ulna.

The patient was hospitalized and initially treated with Butazolidin and Atabrine but was unable to tolerate Atabrine because of gastrointestinal upsets and this drug had to be discontinued. The patient continued to have evidence of rheumatoid activity and in April of 1957 was started on Chloroquine 250 mgs. a day in addition to Butazolidin. In August of 1957 she was able to do all of her work and showed no evidence of rheumatoid activity. She still continued to take one Butazolidin tablet a day with her Chloroquine. In December of 1957 she showed no evidence of limitation of motion or rheumatic activity. Rheumatic nodules on the elbows had decreased markedly. She developed an itch which was thought possibly due to Chloroquine. All drugs were stopped but Chloroquine was reinstated in January of 1958 without further difficulty. The patient is now doing quite well on Chloroquine and is considered to have a complete remission. The nodules have disappeared.

Case No. 4. H. V. M. is a 46 year old lady, first seen in May of 1957, who had typical rheumatoid arthritis which incapacitated her at the time. The onset had been two years prior to being seen with swelling in the right elbow. Aspirin, vitamins and Meticorten had not given relief. Examination showed atrophy of the dorsal muscles in both hands, swelling and tenderness of the proximal interphalangeal joints of the 3rd and 5th fingers of both hands and the metacarpophalangeal joints of both hands, with a 30 degree contracture of the right elbow. The patient was unable to make a fist with either hand and there was marked weakness in both hands. There was 1+ ankle and foot edema bilaterally. The patient was anemic and had an elevated sed. rate. The patient was hospitalized, given a blood transfusion and started on Butazolidin and Atabrine. On August 10th, Atabrine was changed to Chloroquine and by November 2nd, the patient felt well, taking Chloroquine and two to six aspirin per day. This lady has never been completely free of pain which has sometimes been rather marked. She has had intermittent swelling but has not had fever. She had continued to work regularly following her initial hospitalization, though certainly her improvement would be classified as not more than Grade II. It is interesting to note that this patient had two sisters, both of whom have recently died of complications of rheumatoid arthritis, one of these having intestinal hemorrhage following the use of steroids.

Case No. 5. V. A. G. is a 73 year old lady who developed arthritis in 1943. She seemed to have recurring episodes approximately every two years which responded to gold therapy. In August of 1954, she had a recurrence of arthritis which failed to respond to gold, salycilates, cortisone and butazolidin. In June of 1955 she was receiving gold as well as Demerol. She developed osteoporosis and compression fractures of her spine. She was also still receiving Meticorten. In September of 1955, she was started on Atabrine 100 mgs. three times a day, and this was reduced to 100 mgs. a day when the patient's skin became pigmented. On October of 1956 she was asymptomatic and in the spring of 1957 was able to return as a part time teacher. In November of 1957 she was switched from Atabrine to Chloroquine. She was apparently well in the spring of 1958 except for some nervousness. This past summer she had relapsed, even on Chloroquine, and is now again bedridden in spite of Chloroquine therapy.

In these five cases, three are in a state of remission, one is functional, though not without pain, and one has relapsed on therapy.

My findings seem to agree generally with those in more extensive studies, two of which I will review briefly.

In 1956, Dr. A. Freedman[10] of the Hackney Hospital, London, reported on a controlled study of 69 patients with rheumatoid arthritis. The group was divided in half, one-half being given 200, and later 300 mgs. of Chloroquine per day, and the other half being given a placebo. Over a 16 week period, the group receiving the placebo improved only slightly and not significantly. The group receiving Chloroquine improved significantly (that is statistically significantly), with regard to joint tenderness, strength of grip, and ability to lace shoes. Sixteen weeks had been chosen because experience had shown that improvement usually occurred within six weeks. After the trial period, 50 patients on Chloroquine remained under observation; 43 became really well, that is no stiffness or any pain which could not be attributed to use of joints affected by secondary degenerative changes. They had little or no need for analgesics. Three patients had slight joint inflammation and three were taken off of Chloroquine fairly early because of a lack of adequate response. One still had active disease despite Chloroquine. No serious toxic effects were noted in patients treated with 300 mgs. of Chloroquine sulphate for two years.

Dr. Arthur W. Bagnall[11] of Vancouver, British Columbia, reported in August of 1957 on a four year study of continuous use of Chloroquine in 129 patients. Fifty per cent had more than two years of therapy and 20% more than three years. He also did a double blindfold study in which there was no difficulty deciding which capsule contained Chloroquine and which the placebo. Results were considered good, that is Grade I and II response in 70%, and improved work performance, sedimentation rate and hemoglobin levels compiled this major gain. Ninety per cent of these remained on Chloroquine. In the 30% classified as failures, many were subjectively improved. Toxic reactions to Chloroquine could be blamed for less than half of the failures. Of the remainder, many had had prolonged, constant rheumatoid activity of a severe degree. Dr. Bagnall encountered no definite serious toxic reactions. Drug dermatitis was seen in 40% of the patients at some time, but was significant in restricting dosage in only 16%. A seasickness syndrome was seen in 38% but caused only two patients to discontinue therapy. Leukopenia was present in six patients but returned to normal in five on the drug. The other stopped Chloroquine because he was well.

DOSAGE AND ADMINSTRATION OF CHLOROQUINE

Chloroquine is usually given in 250 mg. capsules or enteric coated tablets once a day. Some have found it more convenient to give the drug at night, feeling that this causes less gastrointestinal disturbance. A favorable response is usually seen in from three weeks to three months but occasionally may not be seen for from six to twelve months. In the latent period other therapy, such as aspirin, small doses of Cortisone, or Butazolidin may be used for initial response. No definite duration of therapy can be given at this time since patients are known to relapse after withdrawal of antimalarials.

TOXICITY

Toxicity has included multiform skin rashes which sometime necessitate discontinuing the drug, blurring of vision, a seasickness-type of syndrome which is usually transient, and certain gastrointestinal disturbances which, though not serious, may cause intolerance to the drug. I have observed increased blood pressure in two patients and this should be looked for. No serious reactions have been reported thus far with this drug.

Atabrine has caused such complications as agranulocytosis and exfoliative dermatitis and probably should not be used.

Hydroxycholoroquine (Plaquenyl) seems to have similar anti-rheumatic effect to that of Chloroquine and is, perhaps, less toxic[12].

CONCLUSION

Because of apparent specific anti-rheumatic activity, lack of toxicity and serious side effects, ease of administration and financial advantages to the patient in the way of decreased laboratory work, Chloroquine (or hydroxychloroquine) may be the most ideal drug for treatment of rheumatoid arthritis on the market today.

References

1. New England J. Med. 256: 9, 388, 1957.
2. Med. Clinics of N. Amer. 1029, July 1957.
3. Am. J. Occup. Therapy 3: 177, 1949.
4. Am. J. Med. Sci. 225: 71, Jan. 1953.
5. Lancet 2: 755, 1951.
6. J. Lab. & Clin. Med. 38: 795, Dec. 1951.
7. Lancet 2: 321, Aug. 1952.
8. Lancet 2: 537, Sept. 1952.
9. Ann. Rheumatic Diseases 11: 310, 1952.
10. Ann. Rheumatic Diseases 15: 251, 1956.
11. Canad. M. A. J. 77: 182, August 1957.
12. Clev. Clinic Quarterly 24: 98, April, 1957.

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Venereal Disease

Acute venereal disease may not be a medical chapter of the past, according to a Wisconsin physician.

His conclusion is based on a study which indicates that the bacterium causing one form of venereal disease—gonorrhea—is developing a resistance to therapeutic injections.

Dr. Ernst Epstein pointed out that it previously had been assumed that acute gonorrhea has largely been banished by penicillin. As a result of this study the situation is now changed. "No longer can acute gonorrhea be considered lightheartedly as a disease with certain cure and less disability than a common cold."

His opinions are based on a study conducted in 1958 while he was serving as a captain in the Army medical corps in Korea and are reported in the March 7 Journal of the American Medical Association.

The study included the examination and treatment of 146 servicemen infected with gonorrhea. They were given a series of five daily injections of penicillin. Results indicate a 20 per cent failure to cure the disease.

Commenting on this fact, Dr. Epstein said, "A 20 per cent treatment failure rate is both unusual and unsatisfactory." Previous studies cited by the physician indicate a treatment failure between one and five per cent.

The doctor discarded reinfection as a factor in the high percentage of failure. "All patients were restricted to Army compounds for two weeks and carefully questioned regarding further sexual contacts.

"These considerations do not rule out the possibility that an occasional treatment failure was the result of reinfection. However, they do eliminate reinfection as an explanation for the 20 per cent failure rate."

Dr. Epstein attached "grave significance" to the study. "It is probably only a matter of time until penicillin resistance will be met on an increasing scale all over the world."

To combat this new immunity, Dr. Epstein called for more careful and prolonged follow-up studies coupled with other exhaustive tests to find a cure.

Dr. Epstein is now engaged in the private practice of medicine in Marshfield, Wis.

Clinical Use of Mepazine (Pacatal) in Anesthesia

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ALTHOUGH THE SURGEON and the anesthetist have a variety of preanesthetic agents available, they are still seeking and would welcome any drug which would lessen or eliminate the depressant effects on vasomotor tone and respiration yet keep the favorable effects such as depression of the cerebral cortex, potentiation of anesthetic agents and antinauseant action.

The arrival of the tranquilizing agents on the surgical scene has helped reduce the need and amounts of premedicant drugs required and has also brought about a new safety factor in the operative regime, although they are still not the final answer to the problem.

Among the tranquilizers in use today as preanesthetic agents are the phenothiazines. However, the majority of these compounds produce an undesirable hypotensive action which prevents their wider usage. There is one of these phenothiazines, mepazine (Pacatal), which apparently presents little or no hypotensive effect and the little it might produce can be promptly reversed. Mepazine has a variety of pharmacologic effects which could be of immense importance in surgical procedures, i.e., drying action on the mucous membranes, antiemetic activity and a potentiation of anesthetic agents to permit reduction of dosage.

Nieschulz et al[1,2] showed that mepazine inhibited and stabilized the central and peripheral regulating apparatus of the autonomic system in addition to having a direct depressive action on the central nervous system. Horatz' reported the use of mepazine as a preanesthetic medication in facilitating cooling and as a potentiator of ganglionic blockers. Dechene[4], using mepazine in 500 different studies on dogs and 100 cases of thoracic surgery, noted the drug had value as a controlling agent for cardiac arrhythmias during anesthesia. Pedersen[5] used mepazine in 427 cases as a premedicant for maintaining a stable autonomic nervous system and for its antiemetic activity.

According to Davies et al[6] who used Pacatal in 352 patients, including 204 children and many "poor risks", Pacatal had the following favorable effects, "Good pre-operative sedation, tranquilization more noticeable than hypnosis, ease of control of anesthetic procedure (between anesthesia and analgesic); decreased amounts of anesthetic agents necessary, antisecretory effects avoiding use of atropine in adults, normal response to vasopressors, tranquil post-operative course, decreased incidence of post-operative nausea and vomiting." Lear et al[7] utilizing mepazine in 434 patients notes that ". . . the use of mepazine is associated with minimal restlessness and disorientation in the geriatric patient." Corssen and Allen[8] state that "The absence of a noticeable hypotensive action seems to be one of the most advantageous properties of Pacatal for its use as an adjunct in anesthesia."

From these reports, mepazine seemed to have the ability to reduce the incidence of post-operative nausea and vomiting. It apparently enhanced the sedative action of many widely used pre-operative medications, allayed anxiety, fear and apprehension, had little or no circulatory effects, decreased the amounts of anesthetic needed and reduced salivation and mucous production. Moreover, the drug appeared particularly useful in surgery of the elderly.

We decided, therefore, to give mepazine as a preanesthetic medication in order to evaluate its importance as an adjunct in general surgical procedures. We performed 240 surgical procedures of every variety ranging from endoscopies to major abdominal and thoracic surgery. The table below lists the kind and numbers of operations performed.

The following dosage schedule was maintained:

Pre-operative—night before—100 to 200 mg. of mepazine was given orally together with 3/4 gr. to 1 1/2 gr. of Seconal. Two hours before surgery—100 to 150 mg. mepazine given intramuscularly deep into the gluteal muscle together with Demerol 50 to 75 mg.

Post-operative—mepazine was given to control nausea or agitation, only when necessary, 25 to 50 mg. orally or intramuscularly T.I.D. or Q.I.D.

Results:

The results were uniformly good in all 240 cases.

From the Memorial Hospital of Queens, Jamaica, New York.

Table 1

Major abdominal		66
Appendix or ovary	24	
Hernia	12	
Gall bladder	9	
Hysterectomy	8	
Stomach	5	
Bowel	5	
Splenectomy, embolectomy, pancreatectomy	3	
Endoscopy		54
Cystoscopy	21	
Sigmoidoscopy	18	
Bronchoscopy	15	
Hemorrhoids		20
Fractures, orthopedic surgery		20
Hip nailing	4	
Fractures, extremities	16	
Chest surgery		17
Lung surgery	7	
Cardiac	8	
Diaphragmatic hernia	2	
Thyroid surgery		12
Pilonidal cysts		8
Kidney, prostate and bladder surgery		7
Minor surgery		36
Lipoma, sebaceous cysts, etc.	10	
Tonsillectomy, adenoidectomy	14	
Drainage of abscesses, biopsy, etc.	12	
Total		240

The patients came to the operating room calm and quietly relaxed. This was especially true in the hyperthyroid cases. They did not need any Avertin or intravenous pentothal in their rooms pre-operatively. The skin was warm and dry. Much smaller amounts of sedation or narcotics were required than in the past. No atropine was used in this entire series since mepazine functions very well as a suppressant of saliva and mucus. There also seemed to be a marked reduction in post-operative complications such as pulmonary atelectasis. It is noteworthy that not one case of embolic complication was observed in the entire series. The incidence of nausea and vomiting during the surgery and after was considerably reduced, especially since the patients did not need as much narcotics post-operatively. Drug induced hypotension caused us no difficulty. Those patients who presented a cardiac disease displayed less anxiety, less angina; those who presented auricular fibrillation at first, demonstrated a return to regular sinus rhythm in many cases. All these factors permitted earlier ambulation post-operatively.

Side Effects:

No side effects were seen in patients who were given mepazine pre-operatively only. A few patients who received mepazine additionally post-operatively complained of transitory blurred vision, a common event following phenothiazine therapy.

A few complained of excessive dryness of the mouth and throat; this could be controlled, in most cases, by sucking ice chips. An occasional patient complained of diarrhea, a few others of constipation; whether this was due to drug effect or psychic imbalance could not be determined.

No controls or double blind technique was followed during this series.

The observations made were so striking that they could not be misinterpreted, however, no quantitative analysis was made.

SUMMARY AND CONCLUSIONS

1. Mepazine was used as an anesthetic supplement in 240 cases of surgery who received general anesthesia. The average patient received 100 mg. the night before surgery; 100 mg. two hours before surgery and 75-200 mg. daily post-operatively when there was nausea, emesis or undue agitation.

2. Results were uniformly good in all cases. Patients came to the operating room cooperative and relaxed. A sharp decrease was noted in the amount of barbiturates and/or narcotics required. Post-operative complications, particularly thrombotic and embolic phenomena, were sharply reduced. Early ambulation was hastened by the use of mepazine.

3. A few patients did complain of dry mouth and throat, blurred vision, diarrhea and constipation. In no case were these severe enough to require anything but simple symptomatic treatment.

4. In our opinion, mepazine (Pacatal) should prove a useful adjunct in general surgical procedures since it helps reduce excessive psychic activity, does not depress respiration or cause any unnecessary circulatory reflex activity, reduces secretory and mucous production, is antiemetic, helps reduce the need for larger amounts of more toxic anesthetic agents and finally, helps provide a smoother, safer anesthetic and post-anesthetic course.

References

1. Nieschulz, O., Popendiker, K., and Sack, K.-H.: Pharmakologische Untersuchungen ueber N-Alkyl-piperidyl-phenothiazin-derivate. Arzneimittel-Forsch. 4: 232, 1954.
2. Nieschulz, O., Popendiker, K., and Hoffmann, I.: Weitere pharmakologische Untersuchungen ueber N-Methyl-piperidyl-(3)-methyl-phenothiazine. Arzneimittel-Forsch. 5: 680, 1955.
3. Horatz, K.: Die potenzierte Narkose ohne und mit Unterkuehlung (ihre Vorteile, Grenzen und Gefahren). München. med. Wchnschr. 96: 426, 1954.

4. Dechene, J. P.: Le Pacatal en Chirurgie cardio-pulmonaire. Laval med. 21: 1389, 1956.

5. Pedersen, B. S.: Premedication with Lacumin. Preliminary Results. Nord. med. 54: 1185, 1955.

6. Davies, J. I., Huggins, D. H. M., and Wolkenstein, C. F.: Canadian Anaes. Soc. J. 3: 224 (July) 1956.

7. Lear, E., Pallin, I. M., Chiron, A. E., Rousseau, L., and Aochi, O.: Comparative Studies of Tranquilizers Used in Anesthesia. J.A.M.A. 166: 1438 (March 22) 1958.

8. Corssen, G., and Allen, C. R.: Clinical Evaluation of 10 (N-methylpiperidyl-(3)-methyl) Phenothiazine (Pacatal) for Use in Anesthesia. South. M. J. 51: 689, 1958.

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Medical Research in England

The current path of medical research in England is discouraging rather than encouraging young people to enter a career in the basic sciences.

Unless this trend is reversed, a gradual lowering of the standards of medicine, even at the practical level, is expected.

These conclusions are reported in the March 9 AMA News, a publication of the American Medical Association. The report is based on an original article appearing in a recent issue of The Lancet, an independent British Medical Journal.

Following 11 years of socialized medicine in England, the British state that they now have more medical specialists than ever before. "We should not pretend that this growth in specialist services will by itself keep British medicine in the forefront.

"We cannot maintain our standards without the vigorous pursuit of research in our medical schools, for even good routine will decline without the stimulus of critical thought engendered by investigative work."

Principal reason cited for this downward trend is the lack of encouragement, support, and opportunity given the young student in laboratory and investigative work.

This lack is illustrated in the following manner:

—No new teaching hospitals have been developed in England since before World War II.

—At present there is no surgical animal research laboratory in any English university. One is now nearing completion, however.

—Careers in basic medical science have become unattractive in salary.

—Research directors and medical professors, as well as promising young investigators, are being lured to the United States.

The British point out that those scientists coming to the United States are given encouragement, lavish support, and almost unlimited opportunity in their laboratory and investigative work.

With their small population and national income, the English feel they cannot spend as much money on research as does the United States. They said, however, "We could with advantage spend more than we do, and we should make sure that our resources are used with imagination.

"Our Commonwealth links no longer depend on the strength of our military force, but on our scientific, cultural, and commercial leadership. Progress in one science inevitably impinges on all associated branches.

"In this country we have no lack of talent; but without more financial encouragement, more laboratories, and more facilities for research, we shall lose our best workers, and gradually the standards of medicine even at a practical level will decline."

Pre-Paid Medical Care....

Edited by
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Prepayment Rates

The fact that once again the largest Blue Cross Plan in the State must increase its rates is prompting a renewal and an intensification of the public's interest in medical economics. Physicians across the State now are subject to receive inquiries from their patients concerning *why* must we have periodically increasing prepayment rates and—more difficult to answer—*where* are the progressively higher costs of health care leading us.

Though currently in the local news, Blue Cross is not alone in the squirrel-cage of today's medical economics, necessarily running faster and faster just to keep from going backward. As reported by the *Detroit Free Press*,[1] "Across the country the cost of group health insurance is going up. That's the consensus among officials of leading insurance companies who were asked about the subject by the Associated Press. Mr. K. C. Foster of the group insurance division, Prudential Life Insurance Company of America, puts it this way: 'We understand several of the larger companies plan rate increases in hospital and surgical insurance early in 1959. Some of the others went up in 1958. Hospital rates are going up year after year. The general feeling is they'll continue to go up 5 to 7 percent a year for a while.' "

Why are commercial insurance and non-profit prepayment rates going up? Hospital costs, as Mr. Foster states, are an important factor to be sure, but as concerns rates the effect of the increasing costs of providing a day of hospital care is being compounded by the increased frequency with which days of care are utilized. Hospital costs in relation to Blue Cross rates have previously been discussed on this page[2]; utilization of in-patient services has also been discussed upon several occasions, but in these discussions there has been but little emphasis given to a most important factor—availability of beds.

With the help of federal Hill-Burton funds and State appropriations many Virginia communities have constructed new hospitals, or have enlarged existing hospitals, during the past few years. Construction of beds continues and, according to plans now on drawing-boards, new construction will continue well into the future. Obviously the people of the various communities want the benefit of increased availability of hospital beds—individual members of the communities have personally contributed to their construction costs. Unfortunately, however, but few people of these communities, of the State-wide community, fully realize that they must also personally pay for the maintenance costs of the new beds they have brought into existence as they use them. More beds, more use of beds, more personal expenditure; it matters not whether the expenditure is made as a post-payment or as a prepayment.

To illustrate the situation, here are the trends which are affecting the Richmond Blue Cross Plan, projected from the past into the future:

Year	Beds Available In Plan Area	Days per 1000 Members Paid for by Plan	Cost to Plan Per Day	Cost to Plan Per 1000 Members
1955	5,110	1054	$16.24	$17,117
1956	5,146	1060	$16.96	$17,978
1957	5,394	1120	$18.05	$20,216
1958	5,910	1249	$20.42	$25,505
1959	6,222*	1315	$22.05	$28,996
1960	6,480*	1369	$23.37	$31,994
1961	6,520*	1377	$24.77	$34,108

From this tabulation it is apparent that the amount of prepayment for Blue Cross hospital services which might have been adequate during 1955 is only about half the amount that will be necessary to cover the cost of hospitalization the Plan will experience during 1961. The new rates this Plan recently requested of the State Corporation Commission, incidentally, are designed to carry the Plan until June 1, 1961. The rates it had in effect during 1955 were increased 30% as of June 1, 1958; and the rates then becoming effective are now to be increased by about 50% —the net effect on the 1955 rates being a 95% increase.

The expense of prepayment for hospital care thus, over a period of only six years, will be almost doubled as a result not only of increasing hospital operating

* Including beds now under construction or on drawing-boards.

costs but also of continued construction of new hospital beds. Prepayment is but a budgeting mechanism; without prepayment the public would still find it necessary throughout 1961 to expend for hospital care about twice the amount of its 1955 expenditure, else many of the newer beds would have to be closed. And this fact raises another question: are all the hospital beds now planned for truly necessary?

To completely eliminate any further increase in the number of hospital beds which must be supported, there perhaps could be instituted a do-it-yourself nursing program for individual families—with a resultant increase in time-loss, disability, and maybe even life. Also, shifting a large portion of medical care back to the home would bring a demand for many more doctors than are now in practice. On the other hand, the need to finance maintenance of a progressively increasing number of hospital beds poses the danger of pricing out of the market the heretofore successful voluntary system of paying and prepaying for hospital care.

The answer lies in truly judicious decisions about hospital bed construction. If there are to be beds available in numbers permitting hospitals to be *over-used,* an economic recession would find hospitals to be *over-built.* But an optimum number of beds—plus adequate hospital facilities for ambulatory patient-care—probably can be maintained by the voluntary system throughout the vagaries of the general economy, while at the same time optimum medical practices can be continued.

To ascertain that the optimum number—not a superfluity—of hospital beds are constructed and maintained, and to sponsor the construction of adequate hospital accommodations for ambulatory patients, are challenging problems for the medical profession. Only by successfully meeting its challenge can the profession keep the costs of health care from leading the country into so-called "socialized" medicine.

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[1] "Health Policy Costs Rising Across U. S." Detroit Free Press 128:7B. January 4, 1959.

[2] Pre-Paid Medical Care. Virginia Medical Monthly 85: p. 93-94, February, 1958.

Shoulder Exercise in Forearm Fractures

Even though a person has his elbow, forearm or hand in a cast, he must raise the arm above his head several times a day. Otherwise, he may end up with a stiff and painful shoulder.

Most patients with fractures of the forearm or hand are afraid to do "what may appear to them to be unnecessary movements," two Chicago orthopedists said in the February 28 Journal of the American Medical Association.

Lack of exercise, even for as brief a period as two or three weeks, may cause a shoulder to become stiff. Drs. Robert G. Thompson and Edward L. Compere said doctors must repeatedly tell their patients to raise their injured arms above their heads several times a day.

This advice applies to any patient with a fracture involving the fingers, hands, forearms or elbows, and who is wearing a short or long arm cast, with or without a sling.

If the patient raises the arm above his head several times each day, "much future suffering and disability can be prevented."

In addition, patients should be shown how to move their hands when they have injuries of the elbow and forearm. It is not enough, they said, to simply wiggle the fingers; a complete fist should be made.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Staphylococcal Infections in Hospitals (Continued)

Recommendations for Prevention of Staphylococcal Disease in Hospitals.

There should be a Committee on Infections in every hospital. It is suggested that, where possible, a bacteriologist, a pediatrician, a surgeon, an internist, a nurse, and a hospital administrator be members. The local health director should be invited to serve as a consultant to the committee. The committee should establish a system of reporting infections among patients and personnel and should designate one individual to whom reports are to be made. If cultures are required from all infections, the bacteriologist should automatically send reports to the chairman of the Committee on Infections. Records of all infections should be kept as a basis of epidemiologic study and recommendations for remedial measures.

Positive staphylococcic cultures should be tested for coagulase positivity and for antibiotic resistance. Phage typing should be done when indicated on coagulase-positive staphylococci of apparently epidemic strain.

The committee should review aseptic techniques in use in operating rooms, delivery rooms, nurseries, and in the treatment of all patients with infections. They should recommend methods to improve techniques when indicated and to see to their enforcement.

The committee should attempt to reduce to a minimum consistent with adequate care: a) the use of antibiotics, especially as "prophylaxis" in clean, elective surgery and b) treatment with adrenocortical steroids.

The committee should undertake an educational program to convince professional staffs and lay employees of the hospital of the importance of reporting to the proper authority when they have skin infections, boils, acute upper respiratory infections and the like.

The committee should attempt to discover infections that do not become manifest until after the patients leave the hospital. Some survey should be made of patients who have been sent home. A telephone survey, either complete or sample, is an excellent method. They should attempt to trace the source of any infection with which a patient may be admitted to the hospital.

The committee should require the isolation of hospital patients with staphylococcic disease and should enforce the observation of isolation techniques by all who come in contact with the patient. An educational program directed to the family of such patients should be carried on so that they will understand why visitors have to be excluded or limited.

The committee should undertake or direct special studies among staff and personnel to uncover silent carriers of staphylococci, especially in epidemic situations accompanied by repeated cases traceable to the same type of organism. They should provide appropriate measures for treatment of all carriers who persistently show heavy growth of epidemic strains of staphylococci in naso-pharyngeal cultures or who are identified by epidemiologic evidence. They should advise the transfer of such carriers and personnel with skin infections, boils, acute upper respiratory infections, and the like from locations such as operating rooms, delivery rooms, nurseries, and food-handling positions to other duty stations in the hospital. Occasionally leave of absence for a persistent carrier may be necessary. In a few instances it may be wise to request the resignation of such personnel.

The committee should work closely with the hospital administrator and in many instances should direct their advice or requests through him. The administrator should be directly responsible for maintenance of the general cleanliness of *all* areas in the hospital.

All other possible sources of cross-infection, such as dust, air pollution, and floors must be considered as potentially important factors in the spread of infection. Engineers may prove valuable as consultants in considering air pollution and in inspecting ventilating and air-conditioning systems.

There must be organization to achieve the goal of maintaining proper cleanliness. Within this organization there must be an executive housekeeper and this individual must be responsible to only one person. Every person has a right to know what he is to do, how he is to do it, and to whom he is responsible. Responsibility delegated should carry with it the right to report to only one individual. Work-

men are answerable to their immediate supervisors; the supervisors report to the chief; the chief reports to the administrator; the administrator reports to the chairman of the Committee on Infections. The primary mission of all is to provide a sanitary environment in which ill patients are housed and in which medical treatment may restore them to health.

The housekeeper must have specialized knowledge in cleaning techniques for contaminated areas and for handling contaminated materials, such as linens. The workers must know how to protect themselves as well as how to prevent the spread of infections to others. Infected linens should be bundled in a clean bag or pillow case and the container tagged and handled separate from other linens. Ideally, a disinfectant should be used to scrub the floors throughout the hospital instead of just in the operating rooms, as at present. The time for cleaning wards should be arranged to occur prior to and not when dressings are changed. Likewise, window sills, pipes, doors, and radiators should be dusted with a moistened cloth when dressings are not being changed. Mop heads and scrub water should be changed frequently and always after scrubbing a badly contaminated area.

Usually the plan of instruction in aseptic techniques is a function of the Nursing Service. Housekeeping personnel are masked, capped, and gowned and follow the same general aseptic techniques in entering and leaving a contaminated area as nursing personnel.

Equipment and supplies used by housekeeping personnel in isolation areas are purchased specifically for that part of the hospital and are not to be used elsewhere without taking all precautions to preclude transmission of contamination.

Washable materials used in housekeeping are handled in the same way as contaminated linen from such areas.

Patients admitted to the hospital should be furnished with clean blankets, sterilized linens, and clean mattresses. A large pool of staphylococci in the ward can be avoided by regular disinfection of blankets and curtains. Woolen blankets may be disinfected during laundering. Blankets should be kept out of the operating rooms. Do not mix them on the shelves and do not redistribute them to different patients each night. Cleanliness of mattresses may be approached through the use of disposable or non-disposable plastic covers.

Laboratory Studies. The hospital laboratory should make isolations in pure culture of staphyloccocci from specimens submitted in cases of infection or in epidemiologic studies. It should be determined whether they are coagulase positive and their antibiotic resistance should be tested. These studies can be made in most small laboratories and the Director of the State Laboratory is ready to train these technicians who may wish to review or who may be uncertain of their procedure.

Phage typing is another thing. This must usually be done in a central laboratory and the State Laboratory will take care of specimens submitted for phage typing either by sending them to the laboratory designated for this area or, when equipped, by handling them in their own laboratory. Laboratories should be reminded that the occasional isolation of staphylococci may have no import at the time but later may prove to be a part of an epidemic which is building up. For this reason, cultures should not be destroyed but should be held until it is evident that they are no longer needed.

Members of the broad phage Group III and type 80/81 have been largely responsible for hospital-acquired infections in 1957 and 1958. The latter possess enhance virulence and high degree of communicability.

It is quite evident that prevention and control of staphylococcal infections in hospitals calls for teamwork, for close association of many groups, for constant vigilance, and for full knowledge of the situation prevailing at all times.

References. Hospital-Acquired Staphylococcal Disease, Proceedings of the National Conference, September 1958, sponsored by U.S. Public Health Service and National Academy of Sciences.

Strengthen the Role of the Hospital Housekeeper, Kilpatrick, Charles F., Modern Sanitation and Building Maintenance, July 1958.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	Feb. 1959	Feb. 1958	Jan.-Feb. 1959	Jan.-Feb. 1958
Brucellosis	2	1	4	1
Diphtheria	1	0	3	5
Hepatitis	86	27	112	56
Measles	1539	1107	2880	1541
Meningococcal Infections	11	9	18	19
Meningitis (Other)	15	18	35	35
Poliomyelitis	0	1	2	1
Rabies (In Animals)	15	39	31	82
Rocky Mt. Spotted Fever	1	0	1	0
Streptococcal Infections	1098	757	2112	1286
Tularemia	1	10	5	18
Typhoid Fever	1	1	2	5

Mental Health . . . .

Our Hospital Patients Grow Older

EDNA M. LANTZ

Although the socio-economic problems of our aging population are of moderate interest to everyone, they are of grave, immediate, and particular concern to the Department of Mental Hygiene and Hospitals. Plans for future hospital construction and remodeling for example must be made many years in advance. It is important therefore to predict the size of the geriatric problem with as much accuracy as possible. The only predictive yardstick available is the experience of the past.

One-fourth of the patients now in the mental hospitals of Virginia are 65 years of age and over. This has been true for almost 10 years. Although the increase in percentage each year of this age group has been small, as the total population has increased, the actual numbers of these aged patients has more than proportionately increased. By using the index method of increase with 1949 as a base of 100, the table shows this growth of geriatric population:

Year	Total Population	Index	Population 65 Years of Age and Over	Index	Percent of Population 65 Years and Over Each Year
1949	9,860	100.0	2,294	100.0	23.3
1950	9,914	100.5	2,358	102.8	23.8
1951	9,904	100.4	2,420	105.5	24.4
1952	10,125	102.7	2,456	107.1	24.5
1953	10,532	106.8	2,587	112.8	24.6
1954	10,856	110.0	2,713	118.3	25.0
1955	11,303	114.6	2,914	127.0	26.0
1956	11,037	111.9	2,934	127.9	26.6
1957	11,020	111.8	2,955	128.8	26.8
1958	11,067	112.2	2,930	127.7	26.5

Approximately 66% of the hospital population is made up of two diagnostic groups, diseases of the senium and psychotic (involutional, manic-depressive, and schizophrenic). Eighty-five percent of the patients 65 years of age and over fall into one or the other of these two diagnostic groups. At the beginning of the period the psychotic group had more patients in the 65 years and over age group than the diseases of the senium. This ratio has changed so that now diseases of the senium are slightly larger.

The two diagnostic groups are shown in the following table using 1949 as the base of 100 for the index increase:

Year	Total 65 and Over	Diseases of Senium	Index	Psychotic	Index
1949	2,294	935	100.0	1,032	100.0
1950	2,358	975	104.3	1,039	100.7
1951	2,420	1,002	107.2	1,076	104.3
1952	2,456	992	106.1	1,105	107.1
1953	2,587	1,082	115.7	1,132	109.7
1954	2,713	1,113	119.0	1,173	113.7
1955	2,914	1,296	138.6	1,229	119.1
1956	2,934	1,270	135.8	1,242	120.3
1957	2,955	1,263	135.1	1,240	120.3
1958	2,930	1,231	131.7	1,226	118.9

The comparative indices of both tables show that the hospital population had a higher index in 1955 than any other year during the period. The psychotic age group of 65 years and over has continued to rise except for a slight drop in 1958. The disease of the senium index dropped after the year 1955 but this is misleading, for the following reason:

The number of patients in the "diseases of the senium" group is a reflection of current admission rate. Most of these are in the older age group when admitted and the admission diagnosis is accurate and static. Those patients in psychotic groups are largely a build up and accumulation of patients admittted in earlier years who have grown old in the hospital. Actually many of these were admitted as schizophrenics but now are predominantly arteriosclerotic, etc. They are still carried on the records, however, as of the original diagnosis. Therefore relative drop in diseases of the senium when compared to psychotic is more apparent than real.

In 1955 a special study was made of patients in mental hospitals by length of stay, diagnosis and age. (Results of this study were published in the Virginia Medical Monthly from February, 1956 to July, 1956.) Because of the normal death rate only 7.9% of the 1,475 patients diagnosed as "diseases of the senium" were in the hospital longer than 10 years and 15.0% longer than 5 years, whereas, the manic-depressive had 62.3%, 10 years or longer and 76.0%, 5 years or longer; schizophrenics 54.9%, 10 years or longer and 71.8%, 5 years or longer.

Thus mental hospitals have two types of geriatric patients; those admitted at an early age to grow old in the hospital because they are too mentally ill to be released or have nowhere to go—and those admitted in the later years of life mostly from a mental disease as a result of old age.

The admissions, discharges, and death ratios of the aged patient will be taken up in a subsequent article.

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Approved for publication by Commissioner, Department of Mental Hygiene and Hospitals.

Woman's Auxiliary....

President—Mrs. Charles A. Easley, Danville
President-Elect—Mrs. Walter A. Porter, Hillsville
Vice-Presidents—Mrs. George K. Brooks, Richmond
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Mrs. W. A. Eskridge, Parksley
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Directors—Mrs. J. R. St. George, Portsmouth
Mrs. Lee S. Liggan, Irvington
Mrs. Maynard Emlaw, Richmond

Workshop

The Woman's Auxiliary of The Medical Society of Virginia held their first workshop on February 10th at the new headquarters building in Richmond. Many presidents have tried to hold a mid-year workshop in conjunction with the board meeting. Mrs. Easley is the first president to accomplish the almost impossible. The workshop was on the 10th and the board meeting on the 11th. Attendance was excellent; members came from far and wide.

The workshop began promptly at 9:30 A. M. with registration, announcements and news from the medical society.

Mrs. Walter Porter, membership chairman, reported on membership.

Today's Health: Mrs. William Grigg showed slides on the new look of Today's Health. She said that the magazine has potential readers of 12 million a month.

Bulletin: Mrs. B. T. Eberly reported for the chairman, Mrs. L. E. Mayo.

Program: Mrs. George K. Brooks, chairman, requested that the group have better programs so they would have better attendance at their meetings. She said that auxiliaries cannot compete with women's clubs for programs since auxiliaries do not have budgets for programs. The best idea is to stay with auxiliary interests.

AMEF: Mrs. Carney Pearce, chairman, gave everyone a bulletin on AMEF, explaining its function. The AMEF is sponsored by the American Medical Association, which pays all its operating costs. Every dollar contributed goes to the medical schools. Grants are used for much-needed modern teaching equipment, salary increases to help faculty that would otherwise be forced to leave teaching, and new departments in order to keep abreast with scientific advances.

Recruitment: Mrs. H. C. Thompson, chairman, report there are 156 different occupations connected with health. Eleven out of 100 are physicians.

Historian: Mrs. Hawes Campbell, chairman, asked the members to please send her their clippings.

Legislature: Mrs. Henry R. Bourne, chairman, requested that we be informed regarding bills that are going before Congress.

1. Encourage all auxiliary members to study Social Security amendments such as the "Forand Bill".
2. Study the Jenkins-Keough Bill.
3. Inform other leaders of other organizations concerning the position of medicine in important pending legislation.
4. Cooperate with your state and local medical society's program to "improve the health care of the aged".

Public Relations: Mrs. E. Lynwood Bagby, chairman, introduced Dr. W. Linwood Ball, vice-president of the American Medical Association, who gave an informative talk on good public relations.

Parliamentary Law: Mrs. Maynard Emlaw, chairman, gave a most interesting report which is being printed.

Mental Health: Mrs. A. B. Gravatt, Jr., chairman, introduced Dr. John R. Saunders who spoke on Mental Health. His talk will be printed in an early issue of the Monthly.

Safety: Mrs. M. H. Harris, chairman, introduced Dr. Fletcher Woodward who spoke on Safety. He gave such an excellent talk everyone wanted to know where they could purchase safety belts for their cars.

Philanthropic: Mrs. W. M. Wattles, chairman, gave out letters to the auxiliary presidents for them to mail their contributions to Sheltering Arms and Crippled Children's Hospitals.

Mrs. Edward Ray, chairman, reported on the *Leigh-Hodges-Wright Memorial Fund.*

Student Loan: Mrs. Lee S. Liggan, chairman, said that she would discuss student loans in the board meeting the next day.

Janet Coleman (Mrs. Custis L.).

Parliamentary Procedure in Practice

It was at the meadow of Runnymede, on June 19, 1215, that King John of England was forced by rebellious barons to grant the Magna Carta guaranteeing the rights of his subjects. You may remember that it is said he threw his pen down angrily after signing. The first real recognition of citizenship rights and privileges, however, occurred during the reign of King Edward I, 1272-1307, by virtue of the Magna Carta. This revered document established a Parliament for the people of England, and a government for the people. Rules accepted in the House of Lords and in the House of Commons have become known as "Parliamentary Procedure" and are based on profound judgment and reason.

Thomas Jefferson studied the English Parliament and then wrote the manual which established custom in the United States government, and which is still in use. For the layman, the writings of General Henry Robert are used as an authority in most organized groups.

However, no one person can claim authorship of parliamentary procedure. The origin can be traced to The Ten Commandments, for from these principles all laws have originated, a number now estimated to be about thirty-five million separate rules.

Parliamentary Law is said to be the oil which makes the meeting run smoothly, just as does the oil used to make machinery perform properly. It is based on the Golden Rule, which may be interpreted thus:

1. Assures justice and courtesy to all
2. Advances one thing at a time
3. Recognizes the rule of the majority
4. Protects the rights of the minority

Let us consider here parliamentary procedure as it concerns the responsibilities of, *first,* the presiding officer; *second,* the individual member; *third,* committees in general; and *fourth,* the nominating committee.

First—The presiding officer: I believe that there are certain requisites which are beneficial to the president of any organization, namely:

Physical energy and enthusiasm.

Purpose and direction. (To know the aims of the organization.)

Friendliness. (Discover ability in the members and express appreciation of honest effort.)

Integrity and honesty. (To be impartial and fair in all decisions.)

Technical mastery. (To know the duties of office by studying the bylaws and rules of the organization; to practice to acquire the art of presiding; and to know correct parliamentary procedure.)

The presiding officer should begin each meeting on time. It is not fair to the punctual members to await arrival of the tardy ones. The meeting should also close on time. One of the surest ways to keep members away from meetings is to allow the meeting to drag long past the time set for adjournment. Guest speakers should be advised in advance as to the amount of time alloted for their portion of a program.

There are certain articles which every presiding officer should bring to each meeting:

1. A notebook containing the order of business.
2. A gavel to obtain and maintain order.
3. A watch to time the meeting.
4. A pencil or pen to check each item on the agenda.
5. The constitution, bylaws and standing rules of the organization to settle questions arising in the meeting. Also, a list of all committees.
6. A parliamentary manual to aid the Chair in ruling.
7. A calendar to settle future dates.

Leadership ability very often is born in a person, but it can also be developed through study and careful preparation. Carlyle once observed: "The wise may be taught by reason alone, but the ordinary mind is taught by experience."

The seating of the officers of an organization is usually in the following order: the president, with the secretary at her left; the vice-president to the right of the president, and the treasurer at the left of the secretary. Even in the most informal "home" meetings, the president and secretary should sit together at a table. A guest of honor should be seated to the right of the president.

One word of caution regarding the use of the gavel is given. It is, of course, the symbol of authority, but it should be used sparingly. One tap is sufficient to open the meeting. It may be necessary to use the gavel to restore order when it is breached during the meeting, but here, again, one vigorous tap should be sufficient.

The good presiding officer does not make an unnecessary display of her knowledge of correct parliamentary procedure, but does tactfully assist members, if necessary, in re-phrasing motions. Also, the Chair will explain terminology if it appears that the members do not understand. For example, if debate of a motion continues at great length until

the discussion of the subject is becoming repetitious, some member may say: "I move the Previous Question". The Chair should explain to the assembly that if this motion is passed, it immediately stops discussion and the main motion must be voted on at once. The motion on the Previous Question must be seconded and requires a two-thirds vote to pass.

Frequently when discussion of a matter has been long, the Chair, wishing to bring the matter to vote, may ask: "Are you ready for the question?" Immediately several members will reply with "Question", "Question". Properly the Previous Question should be moved to close debate, and it might be preferable for the Chair to state: "If there is no further discussion of this matter, we shall now vote on the motion before the house", and she would then state the motion and call for the vote.

Second—Responsibilities of Members

Individual members have a duty to their organization. Every member should be familiar with the bylaws. They should attend the meetings regularly, and thus manifest loyalty and faith, show regard for the fellowship and efforts of the other members, and should participate in the activities of the organization to the extent of their experience and talent.

New members who have no experience in organizations, but who should constitute tomorrow's officers and leaders, can acquire proficiency and confidence by learning a few fundamentals of parliamentary procedure.

Members should know the proper way to introduce business. The member should rise and address the chair, as: "Madame Chairman", and wait to be recognized. Then she may propose the motion. Always say: "I move", not "I make a motion". The motion should be seconded, the Chair states the motion and calls for discussion. The maker of the motion has the right to speak first on the question. Remember that every member has the right of question and debate.

Members should learn the correct way to change or add to the main motion. They may do so by proposing an amendment. Amendments to motions never require anyone's consent to be proposed; they automatically outrank their motions. Amendments were created to enable members of the assembly to improve, change, or otherwise help complete a motion so as to make it more acceptable to the body. Only two amendments may be pending at one time. The primary, or first, amendment must be germane to the main motion; the secondary amendment must be germane to the first amendment. Amendments must be seconded, are debatable, and require a majority vote. The secondary amendment is voted upon, then the primary, and finally the main motion as amended.

One of the best ways for a member to serve the organization is to accept committee appointments. This brings us to Point 3.

Third—Responsibilities of Committees

Robert's Rules of Order, Revised, defines Committees thus: "A committee is a body of one or more persons appointed or elected by an assembly or society to consider, to investigate, or to take action in regard to certain matters, or to do all three of these things". Committees are of two classes: (1) Boards of Managers, or Director, or Executive Boards, and (2) Ordinary Committees, such as Standing or Special Committees.

In nearly all organizations, the major part of the work is carried on by committees. An organization could accomplish little if all the discussion and planning had to take place at its general meetings.

Standing committees are provided for in the bylaws, and are appointed or elected at the beginning of the administration to cover each activity of the organization, such as: Program, Membership, Publicity, Ways and Means, and so on. These committees perform the normal functions of the organization and it is of great importance that a member find out the exact duties of a committee before accepting its chairmanship. These committees serve for a fixed term, usually the same as the officers, and submit an annual report.

Special committees perform an entirely different function. The members are selected for a specific purpose and the duties are only temporary. When the work is completed and final report submitted, the committee automatically ceases to exist.

Committee meetings may be informal, except in a large committee. Members need not rise to propose motions or to speak in debate. Motions need not be seconded. There is no limit to the number of times a member may speak on a motion, provided, of course, that other members are not denied similar rights. The Chair may speak to motions without leaving the chair. Discussions in committees are supposed to be confidential, the object of secrecy being to protect full and free expression of the feeling of the members. Only such matters as can be openly discussed before the entire organization should be mentioned in the report of the committee. In committee meetings it is advisable to keep a memorandum for the use of the committee until its report

is completed. This may be done by the Chairman of the committee, or a secretary may be appointed.

The purpose of reports is to inform the organization of the work entrusted to its officers and committees. Ideally, they should not be lengthy but should contain a concise resumé of what was accomplished, with recommendations, if any, at the end of the report. Committee reports should always be written in the third person. Reports may be signed by all the members of the committee. When the chairman is authorized to sign alone, the title "Chairman" appears on the report; otherwise the title is omitted. The use of the words "Respectfully submitted" preceding the signature is no longer customary.

All reports should be read from the platform or near the president's table. The reader should face the assembly so as to be distinctly heard.

The proper disposition of a report depends upon its nature. If a report contains a narrative statement of the work done, no vote is necessary. It is handed to the secretary, and the Chair simply states that it will be filed.

If the report contains a recommendation, the reporting member at the close of the reading, should move its adoption. Recommendations need not be seconded but it is customary in many organizations to do so. When the Chair has stated the question on the adoption of the recommendation or resolution, the matter under consideration is open to debate and amendment like any main motion.

One of the most important of all committees in any organization is the Nominating Committee, and is considered next.

Fourth—Responsibility of the Nominating Committee

I wish to stress the importance of using great deliberation in the selection of members to constitute the Nominating Committee. A Nominating Committee may be either a Standing (year-around) Committee, or a temporary Committee especially appointed or elected in advance of an election of officers. The year-around committee is preferable so that the members of the Nominating Committee may, by attending meetings regularly during the year, be in position to judge which of the members possess leadership ability. They will be able to determine which particular office these members are best able to fill by observing them throughout the year. The responsibility of the Nominating Committee is great and its importance to any organization should never be minimized.

Finally, in view of the leadership role which women have undertaken, a knowledge of correct parliamentary procedure would seem to be almost as useful to them as a knowledge of the home-making arts. In fact, it is a home-making art, because all activities within the home should function more smoothly when basic principles of parlimentary law are applied.

I consider the study of parliamentary law one of the most fascinating and rewarding subjects in adult educational programs. It is fascinating because one is continually learning something new, and it is rewarding because it prepares one for leadership in many fields: in the church, in P.T.A., in club and civic work, and even in the political field.

My first instructor of parliamentary law was Dr. Dera D. Parkinson, a woman of wonderful poise, graciousness and charm, who possesses more degrees in higher learning than any woman of my acquaintance. Mrs. Parkinson happily admits to having lived seventy interesting years but looks a very young sixty. She declares that the study of parliamentary law is a sure way to keep one young.

We may conclude that good parliamentary procedure is essential as a "First Aid" to any assembly in the dispatch of business, because it teaches Christian common sense and courtesy in meetings. Its use will:

First: Provide orderly procedure
Second: Protect the rights of the minority, and
Third: Express the will of the majority.

Lucia K. Emlaw
(Mrs. Maynard R.)

Richmond

In February, the Richmond Auxiliary held our Civil Defense meeting following luncheon at the Branch House.

Speaker for the occasion was Mr. Harold L. Coleman, Administrative Assistant to Dr. W. R. Southward, Jr., who is in the Division of Chronic Disease Control and Chief of Emergency Medical Services, State Office of Civil Defense.

Mr. Coleman outlined the framework of the organization and the medical responsibilities of the local chief. Is any major emergency, the Public Health Department of the Commonwealth will be in charge, with private doctors responsible to the Department. Civil Defense is government, industry and people operating in an emergency. Its program is based on resources versus needs.

Reminding us that a modern-day bomb would probably kill everything within a 5-mile radius and

bring destruction within a 28-mile radius, Mr. Coleman pointed out that his department is working to equip areas throughout the State with supplies of food and medicine sufficient to support any adjacent stricken area. Particular attention has been given key areas that have hospitals with nearby college dormitories which could be converted into auxiliary hospitals with numbers of beds.

This is a timely and sobering topic, and we left with a better understanding of the organizational efforts being made in the public's behalf.

Mrs. J. Henry Hawkins

Northern Neck

The winter meeting of the Northern Neck Medical Auxiliary was held at Lowery's Grill, Warsaw. Following lunch, the business meeting was held in the home of Mrs. Paul Pearson, with the president, Mrs. Ames, presiding.

Mrs. A. B. Gravatt announced the workshop which was held on February 10th in Richmond.

Mrs. Lee Liggan, chairman of Research and Romance of Medicine, reported that Virginia won first place on our Doctors Book (Biographies) at the Southern Medical Auxiliary meeting. We feel justly proud of our small group.

Mrs. Motley Booker, Recruitment chairman, announced a Future Nurses Club, consisting of thirty members, had been organized in Northumberland County. The group voted to make a monetary contribution to this wonderful club and to support it one hundred per cent. They are to be informed of the Student Loan Fund which was founded by one of our members, Mrs. Lee Liggan, during her regime as state president.

Virginia Drewry McG. Pearson
(Mrs. Paul)
Publicity Chairman

New RH Blood Reaction

An explanation for certain puzzling blood reactions in persons receiving transfusions or having babies has been suggested by one of the discoverers of the Rh factor. Writing in the February 14 Journal of the American Medical Association, Dr. Alexander S. Wiener, in collaboration with Dr. Lester J. Unger, explained a new type of Rh reaction.

The Rh factor is a protein substance found in most persons' blood; however, some persons do not have substance and are said to be Rh-negative. If they receive blood containing the factor, they build antibodies (agents that fight foreign substances in the blood) against the Rh factor. This causes a serious reaction. Reactions may also occur in babies with the factor who are born of mothers without the factor. This condition is known as erythroblastosis fetalis.

Rh reactions have been thought to occur only between Rh-negative and Rh-positive blood in Rh-negative persons. Now, however, it has been found that blood reactions can occasionally occur in Rh-positive persons. Rh-positive persons have been found to have antibodies against the factor that strongly resemble those found in Rh-negative persons. This "seeming paradox" is explained by the fact that there are at least four Rh factors in normal blood. If a person is missing one of the factors, he may react to blood containing the missing factor by developing antibodies against it. This knowledge may help solve some of the puzzling problems of erythroblastosis fetalis and transfusion reactions.

They pointed out that the possibilities of such reactions are quite small, since only about 1.6 per cent of Rh-positive Negroes and only about 0.1 per cent of Rh-positive Caucasians would be missing any of the factors.

Dr. Wiener is senior bacteriologist in the office of the Chief Medical Examiner of New York, and Dr. Unger is director of the blood bank at New York University Bellevue Medical Center.

President's Message . . . .

APPLY a conscience-mirror to the medical profession. For the most part you will see practicing physicians as a dedicated group with honesty, integrity, skill, and a devotion to their profession. Ther main objective is acquisition of medical knowledge, relief and prevention of suffering, and the welfare of their patient. They have helped raise the nation's health to that of the best. They are expert in what they do and are content to do it quietly and efficiently.

But, in this mirror we can see some physicians overlooking their obligations to the public and to their profession. They do not choose to practice the Golden Rule. Fringe transgressions in public relations abound in their practice. There are also those who condone fee-splitting, over-charging, and unnecessary operations. Still fewer collaborate unethically with attorneys to increase their incomes from the misfortunes of others. As a group these physicians are trampling on the rights of the public. As individuals each professional status is unsound. None can face the mirror boldly. None can subscribe to his own professional Code of Ethics. The public expects better treatment.

What to do to get these few physicians in line? Publicity first, and then discipline if necessary. Let full daylight shine on each misdoing. Let the public know the profession desires light on these dark methods. To maintain silence and never discuss such behavior is to foster its continuance. Dicipline is indicated when publicity does not stop such mistreatment of the public. The authority for discipline is in each county medical society. There is no other channel. This discipline must be activated through a member or committee of a county medical society.

I repeat—there is no other channel. Someone is derelict.

Walter P. Adams

President

Current Currents

HEALTH CARE FOR OUR OLDER POPULATION is the subject of the following resolution adopted by the Council of The Medical Society of Virginia during its March meeting. All physicians are urged to give it the most careful study and consideration.

We recognize the importance of adequately meeting the health needs of that segment of the population aged 65 years and over. These needs must be provided at a cost in keeping with the modest resources or the low income that is the case with many of these individuals. The best medical care at the lowest cost can be provided, in our opinion, under a voluntary prepayment program.

In the case of medically indigent in the aged group, the medical profession believes that it is the responsibility of the local political subdivision in which the individual resides to provide medical care when it is not otherwise obtainable.

The medical profession, the Blue Cross and Blue Shield Plans and private indemnity companies, recognizing the importance of voluntary prepayment health coverage for those 65 and over, must work together to see that adequate medical care at the lowest possible cost is provided for as many as possible of those in this age group. On the basis of 1957 figures it is estimated that 38.6% of those aged 65 and over have some form of voluntary prepayment insurance. This compares with an estimate of 26% for 1952.

THEREFORE, BE IT RESOLVED that the Council of The Medical Society of Virginia ask the members of the Society to continue their policy of providing medical service in keeping with the ability of the patient to pay, and particularly in the aged group, to recognize the importance of rendering services at the lowest possible cost.

FURTHERMORE, BE IT RESOLVED that if coverage is provided for the aged group with a level of compensation which will permit the development of such insurance and prepayment plans at a reduced rate, members of The Medical Society of Virginia be asked to accept the adjusted fees in payment for services rendered to those individuals with modest resources or low incomes.

FURTHERMORE, BE IT RESOLVED that the Blue Cross and Blue Shield Plans of Virginia and the private indemnity companies domiciled in Virginia be asked to

study the need and to make available policies which will provide the necessary coverage for the special needs of those 65 years of age and over at a cost commensurate with the modest resources or low income of this group.

THE VIRGINIA CONFERENCE OF SOCIAL WORK, to be held at the Hotel Roanoke from April 28-May 1, will feature A Multi-disciplined Study of the Treatment of the Alcoholic. Among the subjects to be discussed are "Techniques in Medical Treatment and Social Work That Are Now Being Used and Explored" and "What Makes an Alcoholic Hard to Reach".

The Conference is open to physicians, social workers, clergymen, lawyers, and anyone actively engaged in working with alcoholics. The three sessions concerned with the alcoholic will be held on Tuesday afternoon, April 28, Wednesday morning and afternoon, April 29.

THE RECORD BREAKING 1958 AMEF Fund of $1,133,654 was distributed to eighty-five medical schools at a special ceremony during the recent Congress on Medical Education and Licensure at Chicago's Palmer House. The basic grant was $6,200 for four-year schools and $3,100 for two-year basic science schools.

STILL AVAILABLE are copies of the special edition of the AMA Journal devoted entirely to federal income tax problems of physicians. If you have lost or misplaced your copy of this very valuable guide, you may obtain another by writing the Law Division, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

GENERAL LEWIS B. HERSHEY, Director of the Selective Service System, has suggested that men not inducted into the Armed Services might be channeled into Civil Defense. In testimony before the Committee on Armed Services of the House of Representatives, the General stated that the civil defense is lagging and something closer to compulsion is needed to make it effective.

DID YOU KNOW that Pete Dawkins, captain of last year's Army football team, suffered an attack of poliomyelitis at the age of 11?

William O. Douglas, Justice of the Supreme Court, a vigorous mountain climber and world traveler, was at one time a victim of polio with both his legs paralyzed.

Editorial....

Chest X-Rays During Pregnancy

THERE IS MUCH CONFUSION concerning the use of chest x-rays in pregnancy and a little light should be most welcome.

A recent communication from Dr. W. Edward Chamberlain who is Special Assistant to the Chief Medical Director for Atomic Medicine is of interest and importance. Dr. Chamberlain is Professor Emeritus of Radiology, Temple University Medical School, Philadelphia. He is also a member of the Committee on Radiology, National Academy of Sciences, National Research Council, and a member of the Tuberculosis Control Advisory Committee, U. S. Public Health Service. Dr. Chamberlain has the following to say concerning the hazards of x-ray radiation to the mother and child:

"The amount of radiation that reaches the uterus as a result of a properly conducted chest x-ray film procedure is extremely small. It is so small that it must be considered to be far below the level at which there might be a possibility—even a remote possibility—of harmful effects upon a fetus at any stage of gestation.

The concern which has been expressed by eminent scientists in recent years, concerning possible harm to the race from medical uses of x-ray, is based upon *genetic* considerations. Much thought has been given by many eminently qualified individuals to the problem of translating this concern and these genetic considerations into rules of conduct for those who govern or supervise the medical uses of x-ray.

We will omit all reference to radiation therapy and limit ourselves to diagnostic x-ray procedures. Here the generally agreed-upon rules are as follows:

1. When an x-ray examination is indicated it should be carried out. This is particularly true when such examination consists of exposing a 14 x 17 chest film in a cassette equipped with double intensifying screens, because of the extremely small degree of exposure to scattered x-ray which is present in this type of examination. The gonads are outside of the direct x-ray beam and are therefore exposed to indirect, "scattered" rays only. Under these circumstances the "indications" for the x-ray examination may be relatively slight or of a routine nature.
2. In the case of procedures involving exposure of gonads to the primary beam (e. g., x-ray studies of the urinary tract, bony pelvis, etc.) the indications for x-ray study should be strong or relatively urgent.
3. At all times the total exposure to radiation should be not more than is necessary for the production of the required, available diagnostic data.
4. Rules 1, 2 and 3 above may be disregarded when the individuals involved are in age groups that are unlikely to produce offspring. (This last rule emphasizes the fact that the scientific concern regarding medical uses of x-ray is not based upon any possibility of harmful effects on the *individuals.*)"

The Virginia State Board of Health has adopted policies which are consistent with the above ideas. Every woman pregnant for the first time should have a chest x-ray to rule out tuberculosis and other abnormal chest conditions. A normal film within two or three years prior to delivery may suffice.

Every woman pregnant for the first time and whose x-ray is negative should have a tuberculin test well in advance of delivery. If the test is negative, it should be repeated with each pregnancy. Where this is not possible because of imminence of delivery a chest x-ray should be taken instead.

In repeated pregnancies where the tuberculin tests are successively negative, additional x-rays over and above the one taken in connection with the first pregnancy need not necessarily be taken. Those patients who have a positive tuberculin test should have a prenatal chest x-ray with each pregnancy, and in between pregnancies if the interval between pregnancies is long. Whenever a chest x-ray is ordered a 14 x 17 film should be used if possible.

E. C. Drash, M.D.

Virginia's Military Medicine 1861-65

THE VIRGINIA CIVIL WAR CENTENNIAL COMMISSION has requested the Richmond Academy of Medicine to serve as the official portrayer of the military aspects of Virginia medicine during the War Between the States. Civil War Commissions have been formed or are in the process of being organized in all of the Southern states and doubtless in many states in the North. Some have questioned the propriety of commemorating a national tragedy that cost more than a half million lives and left scars that are evident to this day. However, there are many lessons that may be learned to our advantage from those sad days of 1861-65. The Confederate sections of Hollywood or Oakwood cemeteries alone contain forty-thousand examples of willingness on the part of our forebears to defend their beliefs until death and this should not be forgotten in our materialistic world of today. It also is probably meet and proper that a century of peace between the two sections of the country should not pass unrecognized.

Be that as it may, a committee is being formed by the Academy with representatives from The Medical Society of Virginia and the Medical College of Virginia in order that representative medical exhibits may be prepared. The choice of the Richmond Academy of Medicine doubtless was influenced by its location in the former capital of the Confederacy and by its proximity to the White House of the Confederacy which is situated directly across Clay Street. The wartime home of Jefferson Davis will attract thousands of out-of-state visitors during the four commemorative years and many of these will find their way into the nearby Academy building. The basement of the Academy no doubt will be used for exhibits as was done during the Richmond Bi-Centennial in 1937 and the Jamestown Medical Exhibit two years ago.

Suggestions will be welcomed by the Committee as to what medical aspects of the period 1861-65 should be depicted. The physicians of Virginia are requested to notify the Editor of the Virginia Medical Monthly of available Confederate items which would be suitable for display. Medical letters, diaries, manuals, publications, hospital records, unusual war-time instruments—in fact anything that would throw additional light on medical personnel, practices or results obtained in 1861-65 would be most desirable.

Sufficient time is available for organizing a worthwhile display. The Academy must take advantage of this opportunity to prepare an exhibit or series of exhibits that will honor our military surgeons of a century ago. If this display is developed to its full potential it also will remind the visitors of the active roll played by physicians today and in doing so it will reflect credit on the entire membership of The Medical Society of Virginia.

Harry J. Warthen, M.D.

News . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the March issue of the Monthly:

Jack Kitchener Bentley, M.D., Dante
William Paul Fletcher, M.D., Covington
James Laster, M.D., Falls Church
Walter Fitch Manley, Jr., M.D., Roanoke
Benedict Nagler, M.D., Colony
John Jennett Neal, Jr., M.D., Danville
George Jeffries Oliver, Jr., M.D., Williamsburg
Edgar Elliot Peltz, M.D., Newport News
Hans H. Stroo, M.D., Roanoke
Thomas Andrew Walker, M.D., Stony Creek
William H. Yao, M.D., Hopewell

Dr. Hogg New Councilor.

Dr. Walter P. Adams, President of The Medical Society of Virginia, has appointed Dr. Paul Hogg, Newport News, as Councilor from the First District, to fill the unexpired term of Dr. Sheppard K. Ames, deceased.

Dr. Williams Resigns.

Dr. Carrington Williams, Sr., has resigned as clinical professor of surgery of the Medical College of Virginia, after serving for twenty years.

David C. Wilson Lecture.

On May 14th, Dr. William Malamud, President of the American Psychiatric Association and Research Director of the National Association for Mental Health, will present the first David C. Wilson Lecture in Psychiatry at the University of Virginia School of Medicine.

This is the first of a series of lectures which has been established at the University in honor of Dr. Wilson, who was chairman of the Department of Neurology and Psychiatry there for 26 years, and has been professor of neurology and psychiatry for 30 years. Upon his retirement as chairman in 1956, the David C. Wilson Society was established and this lecture is sponsored by this Society with the assistance of a grant from the Mona Bronfman Sheckman Foundation.

The lecture is open to all members of The Medical Society of Virginia and other interested professional people.

Dr. Guy W. Horsley, Jr.

Richmond, was guest speaker at the 70th Annual Session Mid-South Postgraduate Medical Assembly in Memphis, February 10-13. His subjects were Diagnosis and Treatment of Benign Lesions of the Breast and Treatment of Carcinoma of the Breast, Combining Surgery and Hormones.

A.M.A. Annual Meeting

Some 15,000 physicians will gather in Atlantic City, N.J., June 8-12 for the 108th annual meeting of the American Medical Association.

The five-day convention—the largest medical meeting in the world—is being held in Atlantic City for the 16th time. The first meeting was held there in 1900.

Doctors will have the opportunity to catch up on hundreds of aspects of a rapidly-changing medical world. This information will be presented in the form of scientific exhibits, lectures, motion pictures, panel dscussions, televised surgical procedures, and industrial exhibits.

New medical research findings and methods of handling daily medical problems will be reported by 500 physicians in scientific papers or participation in symposium and discussion groups.

There will be over 300 scientific exhibits and a similar number of industrial exhibits on display at the famed Convention Hall. The latter group will be exhibited by pharmaceutical houses, medical equipment firms, and other manufacturers.

The House of Delegates will meet throughout the week in the Traymore Hotel, headquarters for the meeting. First order of business for the House will be the selection of a physician to receive one of medicine's highest honors—the Distinguished Service Award. He will be elected from three persons, whose names are submitted by the Board of Trustees. Nominees are screened by the Board from names submitted by the general membership.

The opening session will be addressed by Dr. Gunnar Gundersen, La Cross, Wis., outgoing president, and his successor, Dr. Louis M. Orr, Orlando, Fla.

For the fourth year, high school students who have won special A.M.A. awards in the National Science Fair will show their prize-winning work at the scientific exhibit.

The annual film program will be highlighted by

the presentation of 60 medical motion pictures.

The Woman's Auxiliary to the A.M.A. will hold its meeting Tuesday through Thursday. Representatives of the 75,000 members—all doctor's wives—will discuss their program in sessions at the Chalfonte-Haddon Hall.

Other sidelights of the meeting will be the special art exhibits including that of the American Physician's Art Association, and the 43rd annual American Medical Golfing Association tournament.

For advance hotel and meeting registration information, contact the Convention Services Department, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Tissue Transplantation Grant.

The Department of Surgery of the Medical College of Virginia has received a $20,000 grant for research in tissue transplantation. This was given by The Louis D. Beaumont Foundation of Cleveland. Dr. Joseph Albright, an assistant research professor in surgery, will work on the project.

Plaque to Dr. Bennett.

A plaque paying tribute to Dr. Jesse Bennett, who performed the first successful Caesarean section, was unveiled in January at the Rockingham Memorial Hospital. The unveiling of the plaque culminated efforts on the part of Rockingham area doctors and the Rockingham Medical Society to verify historically the long unreported operation and to honor Dr. Bennett.

Unique Hobby.

Dr. McKelden Smith, Staunton, has adopted the hobby of muskrat trapping, a sport which is being revived again in Augusta County. He has trapped eight muskrats and one mink so far this year. He preserves the furs and then has them made into stoles and neckpieces for his wife and mother. The mink caught this year is the fifth in his four years of trapping.

Dr. Samuel H. Carter, Fort Defiance, also is a trapper. Since January 1st he has trapped forty-five muskrats.

Dr. J. D. Hagood

Has been nominated for Halifax County's Distinguished Citizen award of 1959.

Dr. W. P. McGuire,

Winchester, addressed the February meeting of the Turner Ashby Chapter of the United Daughters of the Confederacy. His topic was Doctors in Gray.

The Virginia State Orthopedic Society

Will hold its annual scientific meeting in Arlington, April 10th and 11th. Dr. George Hollins, President, will preside. Dr. Joseph J. Bunim, Clinical Director of the National Institute of Arthritis and Metabolic Diseases, will be guest speaker. His topic will be Critical Evaluation of Corticosteroid Therapy.

American Goiter Association.

The 1959 meeting of this Association will be held in the Drake Hotel, Chicago, April 30 to May 2nd. The program for the three-day meeting will consist of papers and discussions dealing with the thyroid gland, its physiology, pharmacology, pathology and therapy.

American Board of Obstetrics and Gynecology.

The next scheduled examinations (Part 2), oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, May 8-19.

The deadline date for the receipt of new and reopened applications for the 1960 examinations is August 1, 1959. Candidates may submit their applications at any time before that date to Dr. Robert L. Faulkner, secretary-treasurer. 2105 Adelbert Road, Cleveland 6, Ohio.

The American College of Chest Physicians

Will hold its Silver Anniversary meeting at the Ambassador Hotel, Atlantic City, June 3-7. The scientific program will include prominent speakers on all aspects of heart and lung diseases. There will be a number of symposia, round table luncheon discussions, postgraduate seminars, and motion pictures.

The American Venereal Disease Association

Will hold its annual meeting, April 27 and 28, in the Auditorium of Johns Hopkins Hospital, Baltimore, in cosponsorship with the United States Public Health Service Tenth Annual Symposium on Recent Advances in the Study of Venereal Diseases.

Henry G. Rudner, Sr. Award Contest.

The American College of Gastroenterology has announced the establishment of an award contest for the best unpublished paper on research in gastroenterology or an allied field. The ward is honoring Dr. Henry G. Rudner, Sr., Memphis, chairman of the Research Committee of the College and former chairman of the Board of Governors.

This contest is open to all possessing the degree of Doctor of Medicine from a recognized medical school or university. All papers must represent orig-

inal work in gastroenterology or an allied field. The prize will be an award of $750.00 plus an additional $250.00 for traveling expenses to present the paper at the 24th Annual Convention of the College.

Entries must be received no later than June 1, 1959. Full information may be obtained from the College at 33 West 60th Street, New York 23.

Virginia Society of Ophthalmology and Otolaryngology.

The combined clinical session and annual meeting of this Society will be held at the Monticello Hotel, Charlottesville, April 30, May 1 and 2.

The guest speakers will be Dr. John Harry King, Jr., Washington, D. C.; Dr. Joseph A. C. Wadsworth, New York; Dr. Bruce Proctor, Detroit; and Dr. Francis L. Weille, Boston.

Dr. Calvin T. Burton, Roanoke, is president, and Dr. M. K. Humphries, Jr., Charlottesville, secretary-treasurer.

Wanted.

1. Male Psychiatrist, under 50 years, Diplomate or Board eligible, to direct privately operated outpatient clinic in city of 75,000. Salary: $16,200-$18,000 per annum and commission factor up to $7,000. 2. Same prerequisites in location smaller area; guaranteed salary: $22,500-$25,000.

Write #625, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (Adv.)

Obituaries . . . .

Dr. Austin Ingram Dodson, Sr.,

Prominent urologist of Richmond, died February 21st, following injuries received as a victim of a mugging-robbery. He and Mrs. Dodson were attending a concert at The Mosque and he had parked his car and was walking through the park on his way to join her when he was attacked. He was struck on the head several times and never gained consciousness.

Dr. Dodson was a native of Pittsylvania County and sixty-seven years of age. He was a graduate of the Medical College of Virginia in 1916. He was head of the urology department at the College. Dr. Dodson was the author of a textbook on urology which has come to be regarded everywhere in this country as a basic manual. He was on the staffs of St. Elizabeth, St. Luke's and the Memorial Hospitals.

Dr. Dodson was a member of many professional organizations, both national and international. He was a past president of the Mid-Atlantic American Urological Association and also of the Alumni Association of the Medical College of Virginia. He was an active member of The Medical Society of Virginia, having joined in 1920.

Dr. Dodson is survived by his wife and two sons. One son is Dr. Austin I., Jr., who was in practice with his father.

Dr. Harry Gilman Hudnall,

Prominent physician of Covington, died February 20th, following an illness of more than two months. He was fifty-two years of age and a graduate in medicine from the University of Virginia in 1931. Dr. Hudnall had practiced in Covington for many years before he was appointed to the medical staff of the Veterans Hospital in Roanoke, a position he held at the time he was taken ill. He was in service during World War II, serving as a captain in the medical corps and serving overseas in the European Theatre with the 104th Evacuation Hospital.

Dr. Hudnall was a former president of the Alleghany-Bath Medical Society and also the Valley Medical Association. He had been a member of The Medical Society of Virginia for twenty years.

His wife and three sons survive him.

Dr. Frank Hopkins,

Hot Springs, died February 28th, at the age of eighty-seven. He received his medical degree from the University of Pennsylvania in 1895. Dr. Hopkins had practiced in Hot Springs until his retirement several years ago. He was a Life Member of The Medical Society of Virginia, having joined in 1896.

Dr. Hopkins is survived by two sons and a daughter. A son is Dr. Read Hopkins of Lynchburg.

Dr. Jerome Natt,

Roanoke, died of a heart attack while playing golf on February 22nd. He was fifty-one years of age and graduated from the State University of New York College of Medicine in 1933. Dr. Natt had practiced in Roanoke since 1935. He was a past president of the Roanoke Council for Retarded

Children and was an honorary member of the Brambleton Junior Woman's Club, having been named because of his interest in mentally retarded children. He was also a member of the Optimist Club. Dr. Natt had been a member of The Medical Society of Virginia since 1946.

His wife, two sons and a daughter survive him.

Dr. Isaac Wickham Cunningham,

Richlands, died November 26. He was eighty years of age and a graduate of the Medical College of Virginia in 1909. Dr. Cunningham was on the staff of the Mattie Williams Hospital. He had been a member of The Medical Society of Virginia for forty-five years.

Dr. Taliaferro.

Dr. Robert Milton Taliaferro, truly the Dean of Lynchburg Physicians, died at his home November 26, 1958. He was engaged in the general practice of medicine from 1901 to 1953, at which time he retired because of his health.

He graduated from the Medical College of Virginia in 1897, later attending Medical Clinics in London, England, and the Mayo Clinic in Rochester, Minn.

He first practiced in Pamplin, Virginia. In 1905, four years after coming to Lynchburg, he was associated with Dr. Rawley Martin. Later, he was associated with Dr. T. Erle Rucker, until Dr. Rucker's death.

Dr. Taliaferro was a member of the Lynchburg Academy of Medicine, The Medical Society of Virginia, the American and Southern Medical Associations, holding an honorary membership in the latter.

In addition to having a very busy private practice, Dr. Taliaferro was, for several years, Surgeon for the Norfolk and Western Railway, and for 41 years, until his retirement, was physician for the Lynchburg Jail. Upon his retirement, Judge S. DuVal Martin paid tribute to his "long, kindly and excellent service".

We, who had the privilege of knowing "Robbie", as he was affectionately called, as well as the benefits of his wise counseling, deeply mourn the loss of one of our truly great family doctors.

THEREFORE, BE IT RESOLVED by the Lynchburg Academy of Medicine, that we desire a copy of these resolutions become a part of the minutes of the Lynchburg Academy of Medicine and request a copy be sent to the immediate family and to The Medical Society of Virginia.

JOHN WYATT DAVIS, M.D., *Chairman*
D. P. SCOTT, M.D.
SIMON ROSENTHAL, M.D.

Dr. Ames.

WHEREAS God in His infinite wisdom has seen fit to remove from us the physical embodiment of our friend and fellow physician, Dr. Sheppard Kellam Ames, and;

WHEREAS We have known him for over thirty years as an individual endowed with exceptional characteristics, among which were his love of beauty as expressed through his roses, his love of family as seen in his home, his love of man as demonstrated in his professional life, and his harmony with the medical fraternity both on the Eastern Shore and in The Medical Society of Virginia;

THEREFORE, BE IT RESOLVED That we have suffered a great loss in his going, and that we shall miss his kindly expressions of wisdom; and,

BE IT FURTHER RESOLVED That this expression of our loss be made a part of the minutes of the Northampton County Medical Society, a copy be sent to the Virginia Medical Monthly, and a copy to his family.

JOHN R. HAMILTON, M.D., *Chairman*
H. L. DENOON, JR., M.D.
W. C. HENDERSON, M.D.

Dr. Holland.

WHEREAS Almighty God in His Infinite Wisdom didst remove from our midst our loyal friend and co-worker in the Art of Healing, John Gill Holland, M.D. on December 24th, 1958, the Lynchburg Academy of Medicine requests that the following resolutions be spread upon the minutes of its meetings and that a copy be sent to his family, to the Virginia Medical Society, the American Academy of Ophthalmology and Otolaryngology and to the Virginia Society of Ophthalmology and Otolaryngology, of which he was a member.

BE IT THEREFORE RESOLVED That the Lynchburg Academy of Medicine, his co-workers, the other medical societies of which he was a member, and the City of Lynchburg and his close personal friends have lost one whose character, as evidenced by the high ideals with which he practiced his profession, was outstanding in every respect; one who may be replaced, but whose place will never be taken in our hearts.

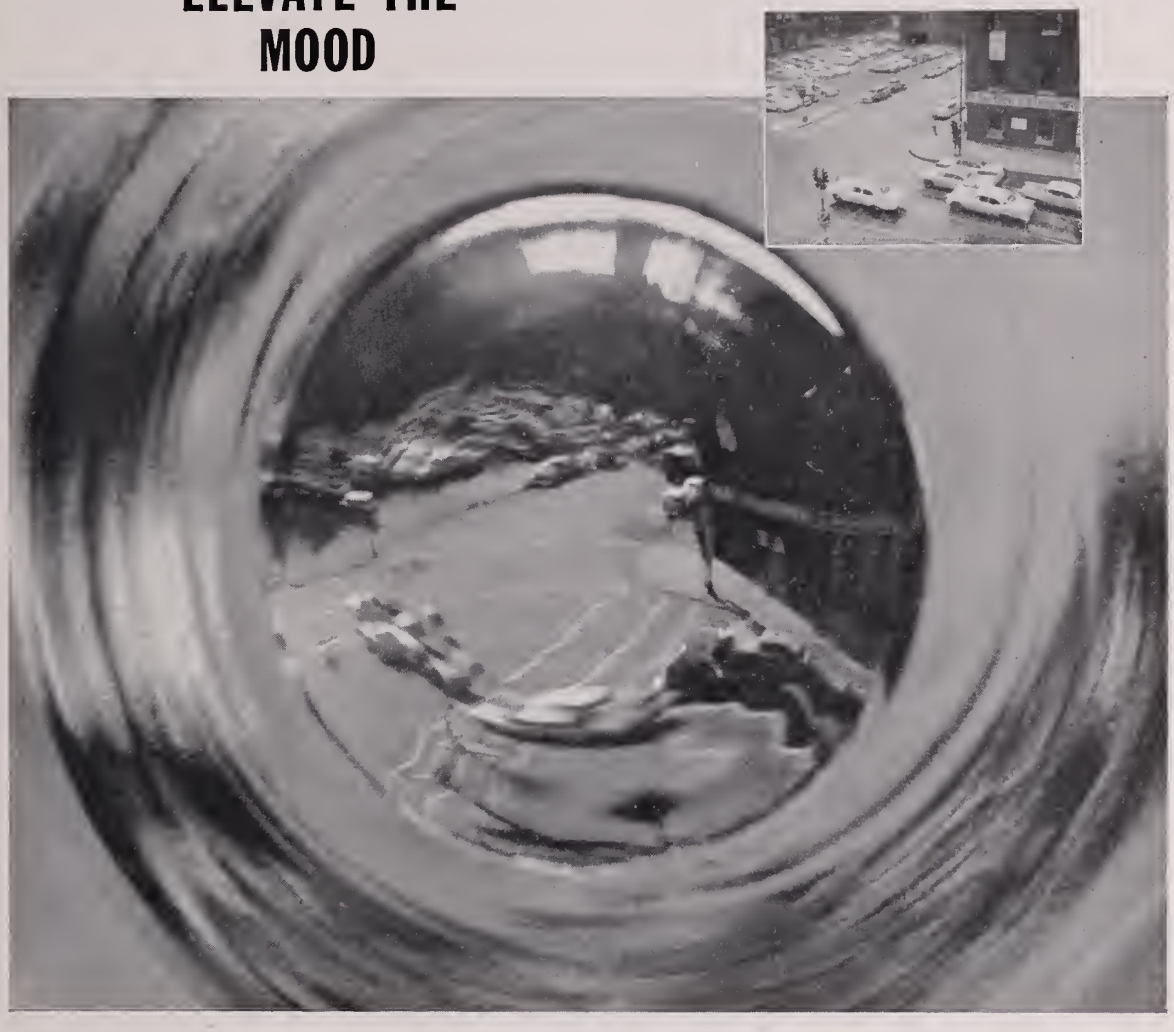
BE IT ALSO KNOWN That during his whole professional career he rendered that service to the patients, hospitals and physicians of this community and a large surrounding area with an idealism and faithfulness to the truth and to the unbounding welfare of all who came under his care.

BE IT ALSO KNOWN That Dr. Holland's management of relations with his fellow physicians and maintenance of professional duties during recent months, under circumstances that to some might be insurmountable, gives us pause for thought and admiration, and stands as evidence of his high ideals and personal courage.

BE IT FURTHER KNOWN That his loyalty to his friends has left an everlasting imprint upon all who came to love and know him closely.

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*Pratt, R. T. C., and McKenzie, W.: Anxiety States Following Vestibular Disorders, Lancet 2:347 (Aug. 16) 1958.

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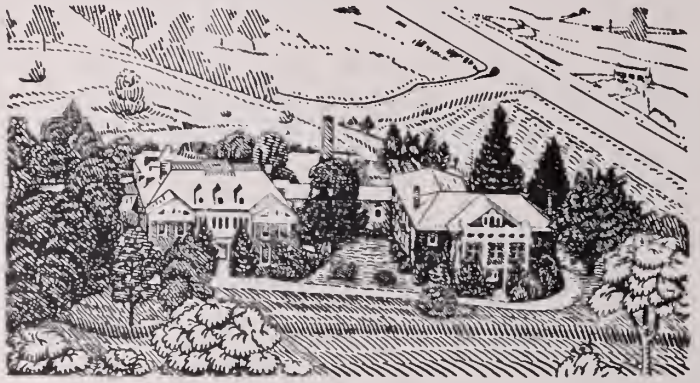
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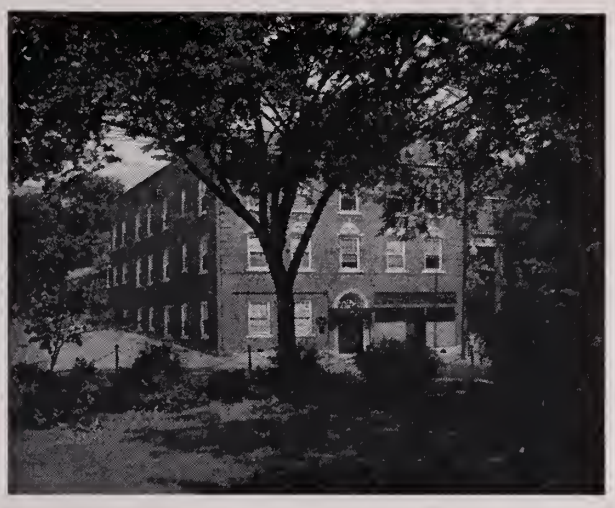
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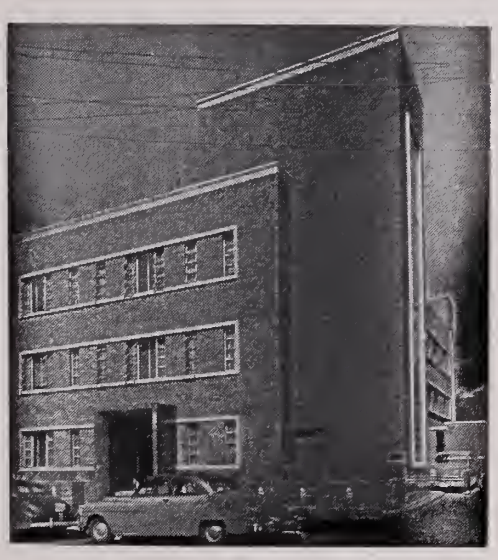
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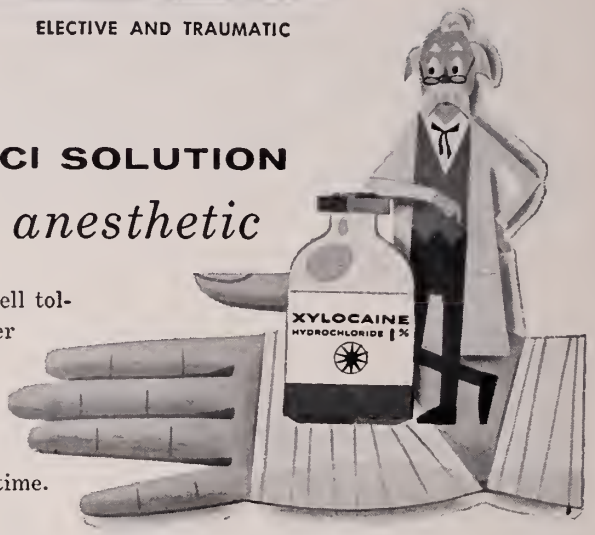
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1. Eisenberg, B. C.: Clinical Medicine *5*:897-904 (July) 1958.
2. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958.
3. Robinson, H. M., et al.: So. Med. J. *50*:1282 (Oct.) 1957.

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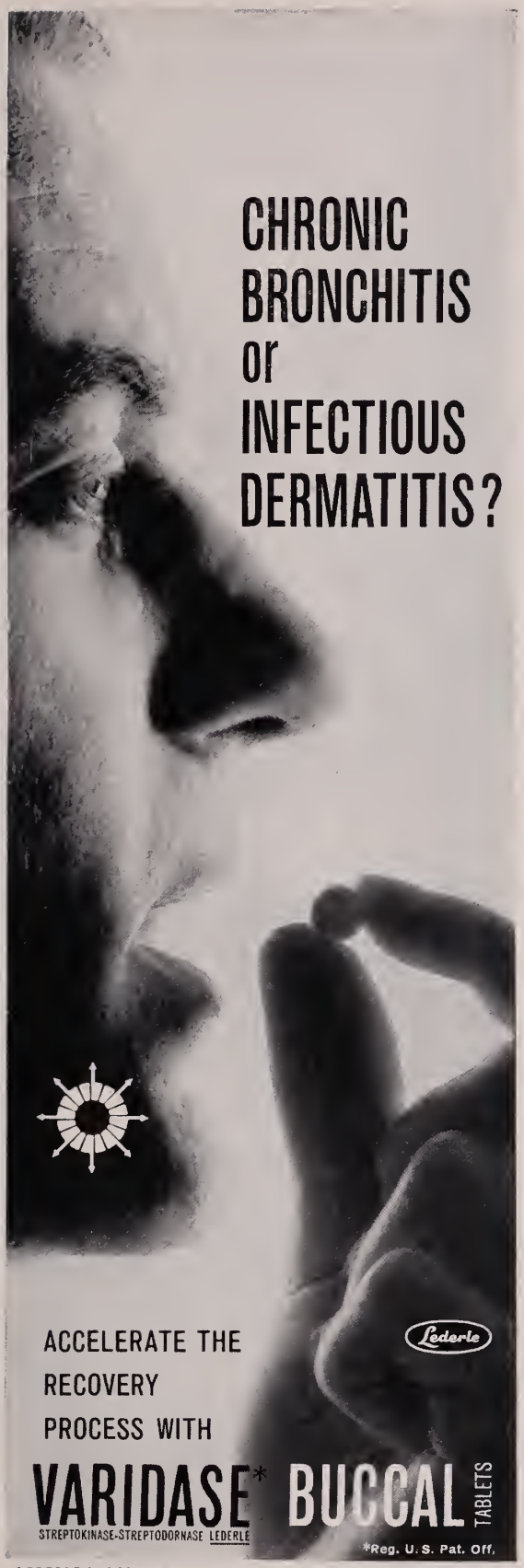
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new for total management of itching,[1,2] inflamed,[3,4] infected[5,6] skin lesions

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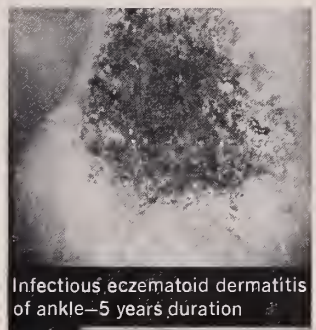
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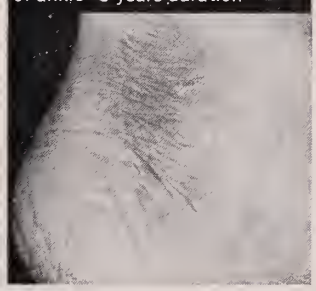
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References: 1. Shelmire, J.B., Jr.: Monographs on Therapy 3:164 (Nov.) 1958. · 2. Nix, T.E., Jr., and Derbes, V.J.: Monographs on Therapy 3:123 (Nov.) 1958. · 3. Robinson, R.C.V.: Bull. School of Med., U. Maryland 43:54 (July) 1958. · 4. Sternberg, T.H.: Newcomer, V.D., and Reisner, R.M.: Monographs on Therapy 3:115 (Nov.) 1958. · 5. Clark, R.F., and Hallett, J.J.: Monographs on Therapy, 3:153 (Nov.) 1958. · 6. Smith J.G., Jr., Zawisza, R.J., and Blank, H.: Monographs on Therapy, 3:111 (Nov.) 1958. · 7. Monographs on Therapy, 3:137 (Nov.) 1958. · 8. Howell, C.M., Jr.: North Carolina M.J. 19:449 (Oct.) 1958. · 9. Bereston, E.S.: South. M.J. 50:547 (April) 1957.

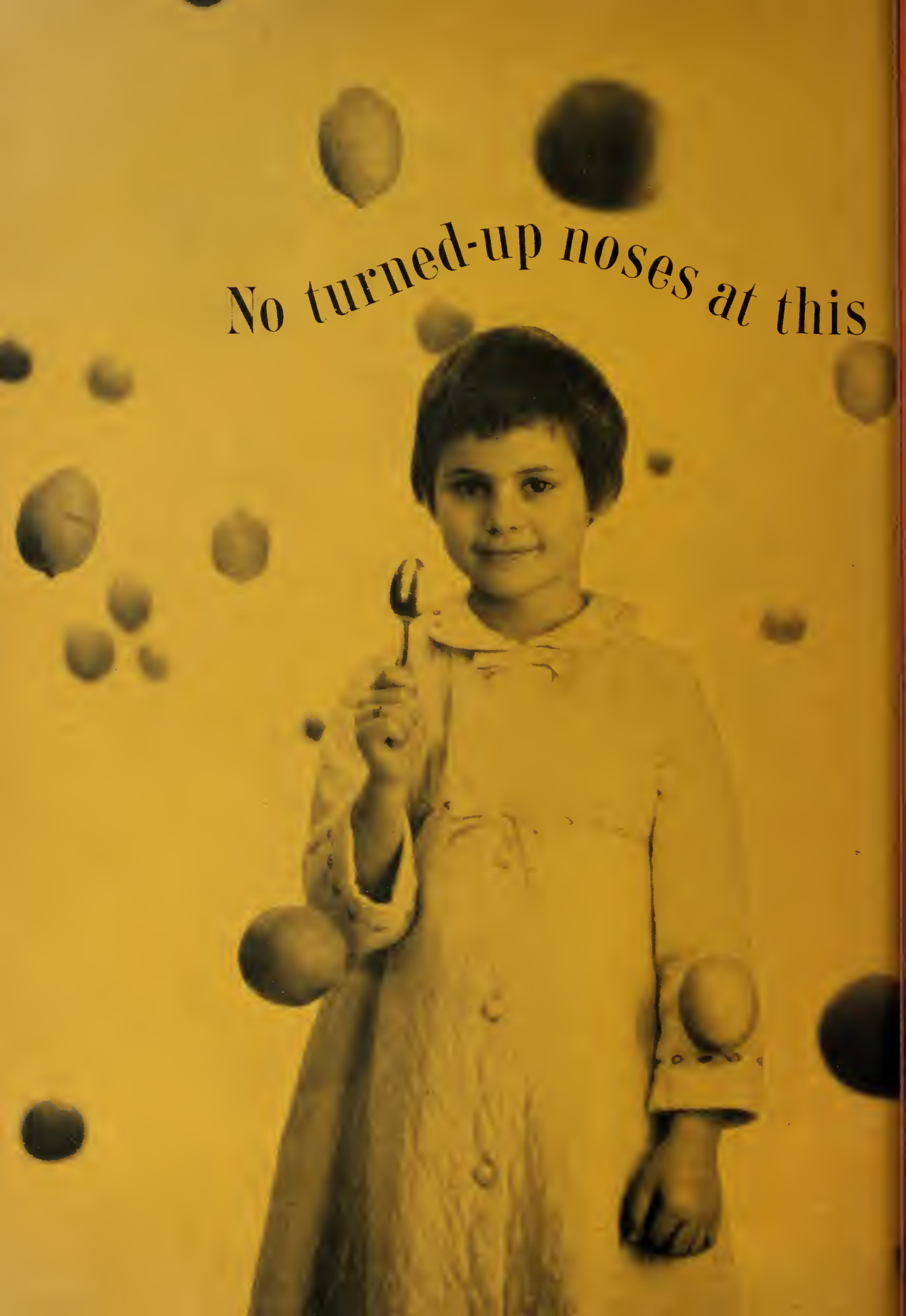
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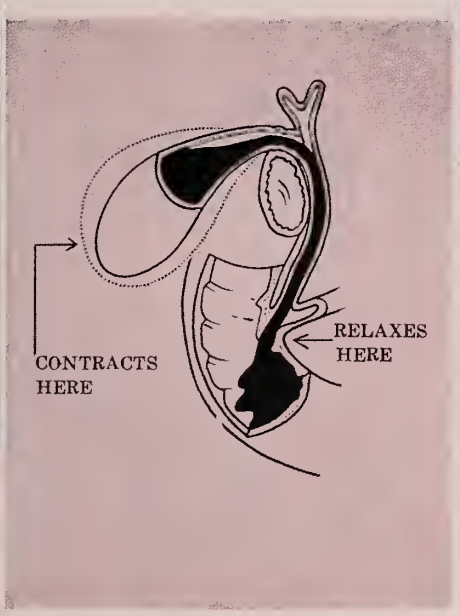
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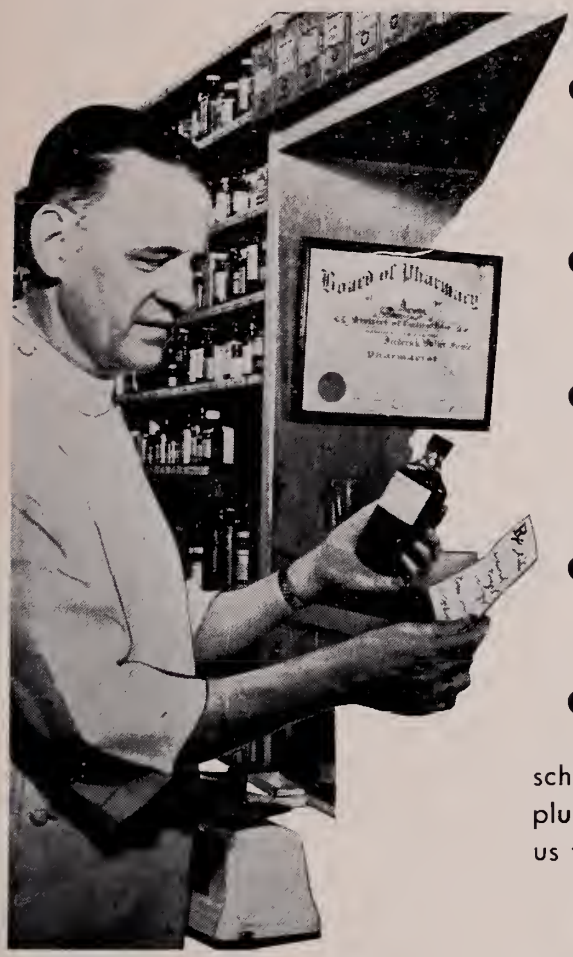
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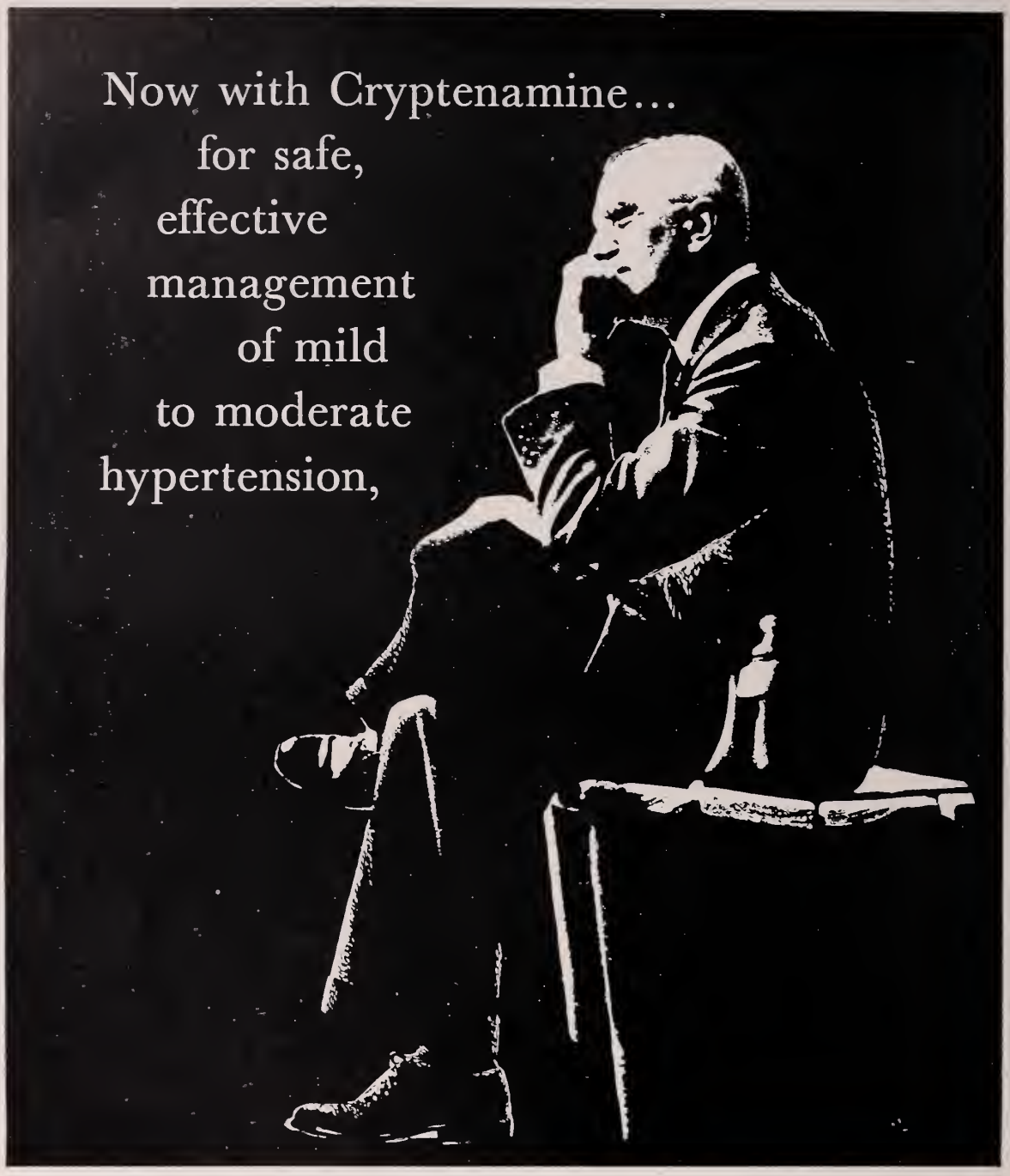
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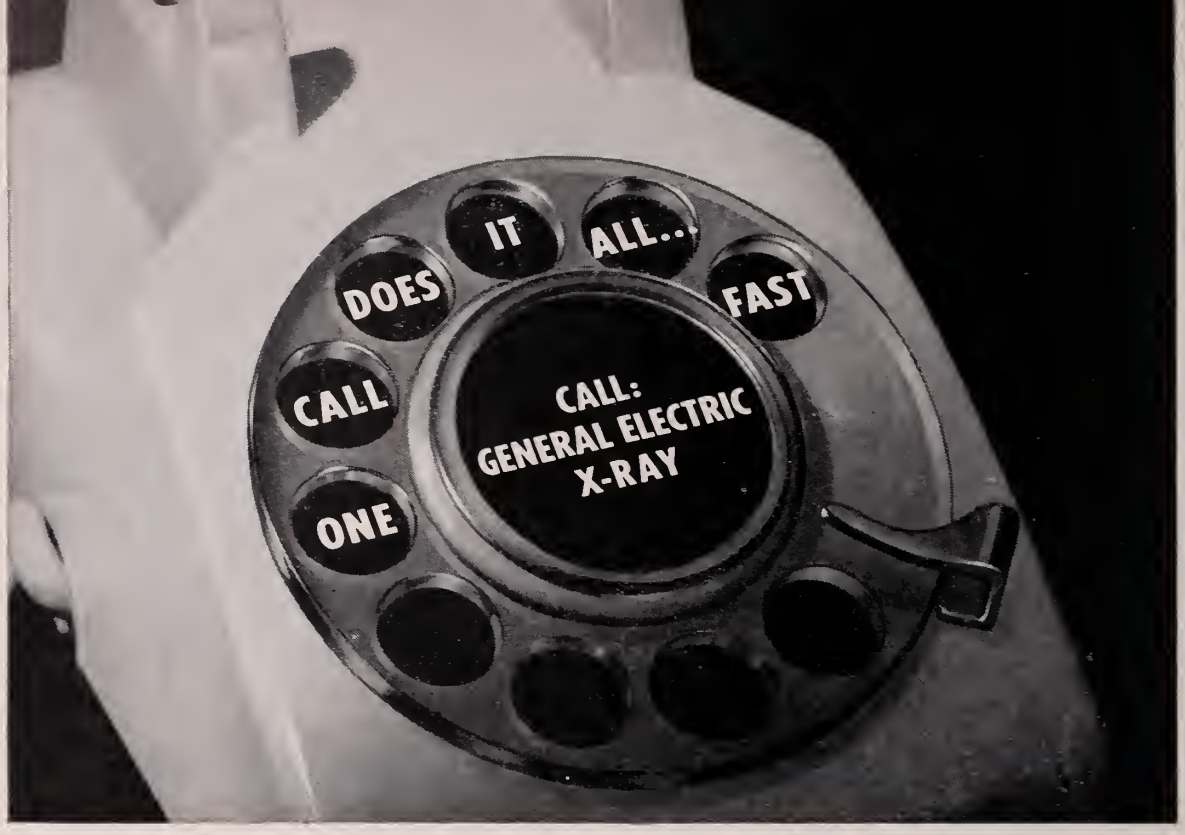
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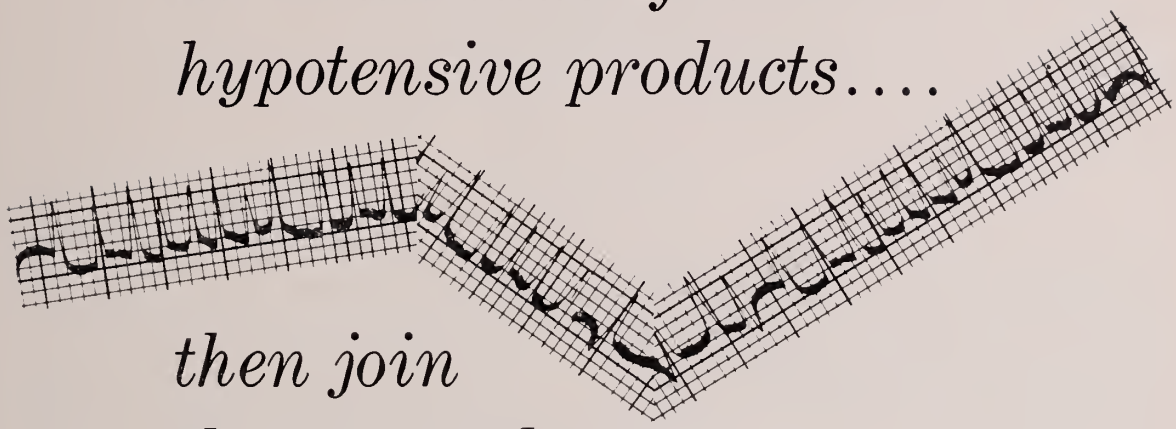
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Component and Other Medical Societies in Virginia

(Officers and Others are Requested to Notify the **Monthly** of Changes)

SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomack County	Joseph L. DeCormis, Accomac	Dr. J. C. Doughty, Onancock	Quarterly
Albemarle County	Byrd S. Leavell, Charlottesville	W. Copley McLean, Charlottesville	Monthly
Alexandria	James M. Moss, Alexandria	Robert K. Wineland, Alexandria	Monthly
Alleghany-Bath Counties	T. R. Warren, Clifton Forge	George N. Chucker, Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst		
Arlington County	Stephen J. Sheehy, Arlington	Howard O. Mott, Arlington	Monthly
Augusta County	B. K. Weems, Waynesboro	W. S. Smith, Waynesboro	Quarterly
Bedford County	S. L. Rucker, Moneta	O. B. Darden, Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	J. C. Moore, Grundy	J. S. Richardson, Grundy	Monthly
Charlotte County	Stuart Wilson Tuggle, Keysville	Thomas Watkins, Drakes Branch	
Culpeper County	J. Bernard Jones, Culpeper	James P. Baker, Culpeper	Monthly
Danville-Pittsylvania	Samuel Newman, Danville	Samuel Atkins, Danville	Monthly
Fairfax County	T. E. O'Brien, Falls Church	John Prominski, Falls Church	Monthly
Fauquier County	Evan H. Ashby, Jr., Remington	James L. Dellinger, Warrenton	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fouth District	Robert Keeling, South Hill	Clyde W. Vick, Jr., Petersburg	Five times a year
Fredericksburg	D. W. Scott, Jr., Fredericksburg	J. E. Grimes, Fredericksburg	Quarterly
Halifax County	G. L. Wilkinson, South Boston	L. W. Roberts, South Boston	Quarterly
Hampton	Frank Kearney, III, Hampton	Helen Dorsey, Hampton	Quarterly
Hanover County	John D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	
Hopewell	W. M. Phipps, Hopewell	W. P. Youngblood, Hopewell	Monthly
James River	Margaret Pennington, Buckingham	J. H. Yeatman, Fork Union	Quarterly
Lee County	Beryl H. Owens, Rose Hill	H. A. Kinser, Pennington Gap	Quarterly
Loudoun County	S. S. Morrison, Leesburg	J. W. Gibson, Middleburg	Monthly
Louisa County	Griffith B. Daniel, Louisa	A. R. Southall, Louisa	Only call meetings
Lynchburg	G. B. Craddock, Lynchburg	E. F. Somers, Lynchburg	Monthly
Medical Society of Virginia	Walter P. Adams, Norfolk	R. I. Howard, Richmond	Roanoke Oct. 4-7
Mid-Tidewater	A. W. Lewis, Jr., Aylett	M. H. Harris, West Point	Quarterly
Newport News	S. H. Mirmelstein, Newport News	J. W. Massey, Newport News	Monthly
Norfolk County	K. K. Wallace, Norfolk	Meyer Krischer, Norfolk	Semi-Monthly
Northampton County	John R. Mapp, Nassawadox	William F. Bernart, Nassawadox	Quarterly
Northern Neck	Paul Pearson, Warsaw	Harvey Goode, Jr., Kilmarnock	Quarterly
Northern Virginia	G. R. Waterman, Woodstock	Dennis P. McCarty, Front Royal	Three times a year
Orange County	H. C. McCoy, Gordonsville	R. S. LeGarde, Orange	Call Meetings
Patrick-Henry Counties	E. M. McDaniel, Martinsville	Bate C. Toms, Jr., Martinsville	Quarterly
Portsmouth	Paul W. Robinett, Portsmouth	Harry D. Cox, Portsmouth	Monthly
Princess Anne County	J. A. White, Virginia Beach	J. P. Charlton, Virginia Beach	Monthly
Richmond	T. W. Murrell, Jr., Richmond	Patty R. Boatwright, Richmond	Semi-Monthly
Roanoke	Alexander McCausland, Roanoke	R. F. Bondurant, Roanoke	Monthly
Rockbridge County	Brooke B. Mallory, Lexington	O. Hunter McClung, Lexington	Monthly
Rockingham County	J. E. Wine, Harrisonburg	J. T. Hearn, Penn Laird	Quarterly
Russell County	Robert F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City	G. C. Honeycutt, Jr., Gate City	Monthly
Smyth County	O. O. Smith, Jr., Marion	R. D. Campbell, Saltville	Quarterly
Southwestern Virginia	J. Glenn Cox, Hillsville	M. A. Johnson, III, Roanoke	Semi-annually
Tazewell County	W. A. Cover, Tazewell	Rufus Brittain, Tazewell	Quarterly
Tri-County	J. W. Lambdin, Franklin	Irwin H. McNeely, Franklin	Quarterly
Tri-State	W. R. Jordan, Richmond	R. B. Davis, Greensboro, N. C.	October
Va. Acad. Gen. Practice	W. Linwood Ball, Richmond	R. B. McAllister, Richmond	Richmond May 7-10
Va. Sec. Amer. Col. Chest Phys.	S. M. McDaniel, Jr., Norfolk	George Ewart, Richmond	October
Va. Sec. Amer. Col. Phys.	R. Earle Glendy, Roanoke	William H. Harris, Jr., Richmond	October
Va. Diabetes Assoc.	William R. Jordan, Richmond	L. J. Sheppard, Richmond	Semi-annually
Va. Ob-Gyn. Soc.	W. C. Winn, Richmond	Brock D. Jones, Jr., Norfolk	October
Va. Orthopedic Soc.	G. G. Hollins, Jr., Norfolk	R. H. Fisher, Roanoke	Spring & October
Va. Pediatric Soc.	Harry D. Cox, Portsmouth	O. Watts Booth, Newport News	October
Va. Peninsula Acad. Medicine	E. S. Roberts, Kecoughtan	M. F. Sherrill, Newport News	Monthly except June, July & Aug.
Va. Neuropsychiatric Soc.	W. M. Tucker, Richmond	W. D. Buxton, Charlottesville	Semi-annually
Va. Radiological Soc.		F. A. Kearney, Hampton	Spring & October
Va. Soc. Anesthesiology	Lewis E. Mangus, Alexandria	Campbell Harris, Jr., Richmond	Semi-annually
Va. Soc. of O. L. & O.	Calvin T. Burton, Roanoke	M. K. Humphries, Jr., Charlottesville	Once a year
Va. Soc. of Pathology	Robert Faulconer, Norfolk	George J. Carroll, Suffolk	Quarterly
Va. Surgical Soc.	Edmund Horgan, Winchester	Robert Payne, Jr., Norfolk	October
Va. Urological Soc.	F. S. Beazlie, Jr., Newport News	Frank N. Buck, Jr., Lynchburg	October
Washington County	S. E. Miller, Abingdon	James M. Suter, Abingdon	Monthly
Williamsburg-James City	Janet Kimbrough, Williamsburg	Robert E. DeBord, Williamsburg	Monthly except for June, July & Aug.
Wise County	George E. Snead, Derby	William Schmidt, Big Stone Gap	Every other month except Aug.
Wythe-Bland	E. C. Lanz, Wytheville	S. W. Huddle, Rural Retreat	Every other month

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PAGE 825

SPONTIN IN SERIOUS

A Special Report from Abbott
to the Medical Profession
on a Year's Clinical Experience
with SPONTIN®
(Ristocetin, Abbott)

In a Spanish province, a patient lay dying of endocarditis. A short wave radio appeal for SPONTIN was intercepted by a Baltimore physician. The antibiotic was immediately flown to this faraway land, and 10 days later—the patient had recovered.

In Chicago, a moribund patient had been administered 18 combinations of 10 different antibiotics without success. Involved was a hospital-acquired staphylococcal pneumonia—plus complications. SPONTIN was substituted and the patient lived.

A five-week-old infant was critically ill with staphylococcal enteritis. Treatment failures included erythromycin and chloramphenicol. Three days of SPONTIN saved this life. The list is long and impressive and it grows daily.

Recently, a study[1] was made of serious and resistant staphylococcal infections reported to Abbott Laboratories. Many of these cases had serious complicating diseases—many were moribund, or almost so, at the time SPONTIN was started. Yet, out of the 160 staphylococcal cases studied, 93 were reported cured and 38 improved after the administration of SPONTIN.

Out of the total of 251 patients with severe infections caused by gram-positive or mixed organisms, 149 were reported cured and 53 others improved. And the record for pediatric practice was every bit as good.

Additionally, SPONTIN continues to exhibit exceptional bactericidal activity against coccal infections[2]. And, according to another study, SPONTIN provides successful short-term therapy in endocarditis[3].

Only last October, at the Antibiotics Symposium in Washington, D. C., a panel of six leading antibiotic experts placed SPONTIN at the top of all other commercially-available antibiotics for treating serious staphylococcal infections. Also, six papers—all dealing with the effectiveness of ristocetin (SPONTIN®) in treating staphylococcal infections—were presented at the Symposium.

One of the most encouraging aspects of the year's literature on SPONTIN is the increasing testimony to its safety. As the months have passed and cases have accumulated by the hundreds, it has become apparent that careful attention to dosage recommendations has practically eliminated toxicity and side effects as serious obstacles to therapy. Also, recent improvements have been made in the manufacture of SPONTIN; the drug is now made from pure crystals.

A recent report[4] in the Journal of the American Medical Association concluded, "It is our opinion that, if proper precautions are observed, ristocetin is a [well tolerated] and potent agent to employ in the treatment of staphylococcal infections." And in another study, after successfully treating 28 patients with a variety of staphylococcal infections, the authors reported[5], "No serious complications were noted."

Few more dramatic records have been written in such a short space of time. SPONTIN has proved itself to be a good answer, perhaps the best answer at present, to the resistant staphylococcal problem—and of real value in other serious coccal infections. It may well be your answer when you're confronted with a serious infection.

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STAPHYLOCOCCAL INFECTIONS

Excerpts from Reports Read at the Antibiotics Symposium

Spontin In Treating Severe Respiratory Infections —"In 13 of 20 patients the results were excellent, with clinical response being evident within one to four days after institution of therapy. In three additional patients, there was some degree of improvement in pneumonic processes superimposed on tuberculosis in two cases and on pulmonary neoplasm in one. In all other cases, serious antecedent pathology undoubtedly influenced the negative or equivocal response to ristocetin therapy.[6]"

Spontin In Treating Staphylococcal Infections—After successfully treating 28 patients, the authors wrote, "Ristocetin or Spontin has proved to be bactericidal and bacteriostatic, particularly for the *Staphylococcus aureus,* which is often resistant to many other antibiotics.[5]"

Spontin In Treating Seven Difficult Cases — "Ristocetin has produced excellent results in eradicating, mitigating or preventing infection in seven selected difficult cases. Six of the seven cases involved *Staphylococcus aureus* which did not respond to chemotherapy with other antibiotics.[7]"

Spontin Blood Levels In Children — "Ristocetin was administered as a single intravenous injection of 12.5 milligrams per kilogram. This resulted in serum levels ranging from 1.3 to 10.6 mcg. after two hours with a gradual fall to a level of 0.7 mcg. per cubic centimeter or less after 12 hours.[8]"

Spontin In Treating Staphylococcal Pneumonia —"Ristocetin was used in the treatment of 24 patients with staphylococcal pneumonia, 17 of whom had failed to respond to previously administered antibiotics. Complete clearing of pneumonitis was obtained in 16 patients and significant improvement occurred in two others. Two patients died of pneumonia; four others succumbed to other lethal diseases.[9]"

Spontin In Treating Children and Adults — "Ristocetin completely controlled severe staphylococcal infections in 11 adults and six children who received adequate therapy.[10]"

1. Totals represent published reports and personal communications to Abbott Laboratories.
2. Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 15, 16, 17, 1958.
3. Romansky, M. J., and Holmes, R., Successful Short-Term Therapy of Enterococcal and Staphylococcal Endocarditis with Ristocetin—Seven Patients. Preliminary Report, Antibiotics Annual, 1957-58, p. 187.
4. J. A. M. A., 167:1584, July 26, 1958.
5. Bush, L. F., et al., The Use of Ristocetin (Spontin) in Staphylococcal Infections, In Press, Antibiotics Annual, 1958-59.
6. Billow, F. J., et al., Clinical Observations on Ristocetin—A Preliminary Report on its Efficacy and Toxicity in 20 Unselected Severe Respiratory Infections, In Press, Antibiotics Annual, 1958-59.
7. Miller, J. M., et al., Ristocetin in the Treatment of Seven Selected Difficult Cases, In Press, Antibiotics Annual, 1958-59.
8. Asay, L. D., et al., Ristocctin Scrum Levels in Children, In Press, Antibiotics Annual, 1958-59.
9. Schumacher, L. R., et al., Experiences with Ristocetin in Staphylococcal Pneumonia: Observations in 23 Cases, In Press, Antibiotics Annual, 1958-59.
10. Terry, R. B., Ristocetin in Children and Adults, In Press, Antibiotics Annual, 1958-59.



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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

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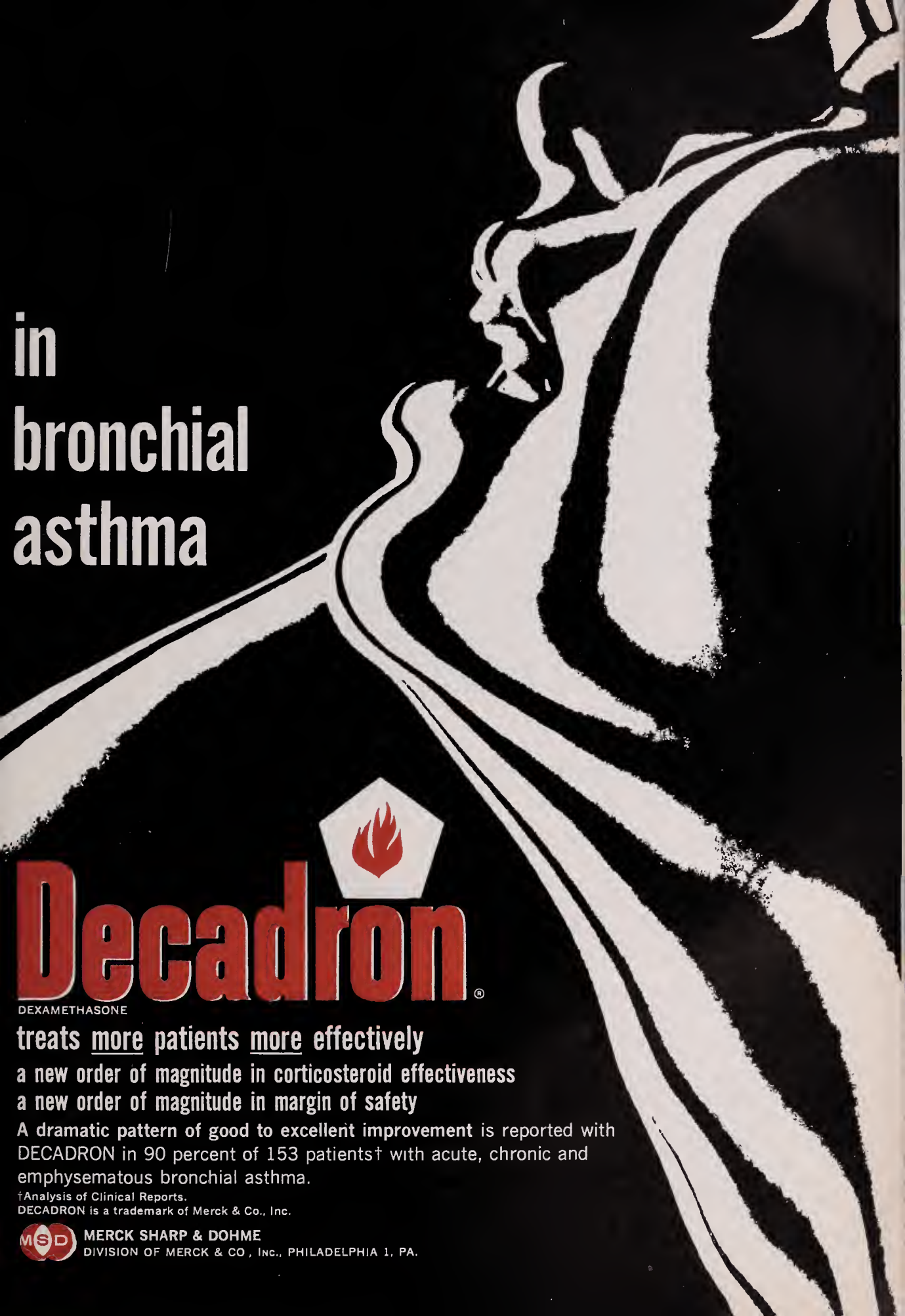
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Though this filter satisfied everyone on its ability to reduce tars and nicotine to the lowest level among the largest selling brands, there was still work to be done in the areas of taste and draw. After additional months of research, a new tobacco blend was developed which delivered rich taste *after* the smoke had passed through the filter. Next in the series of laboratory triumphs was a method of improving the draw to compare with the most free-drawing of all filter brands.



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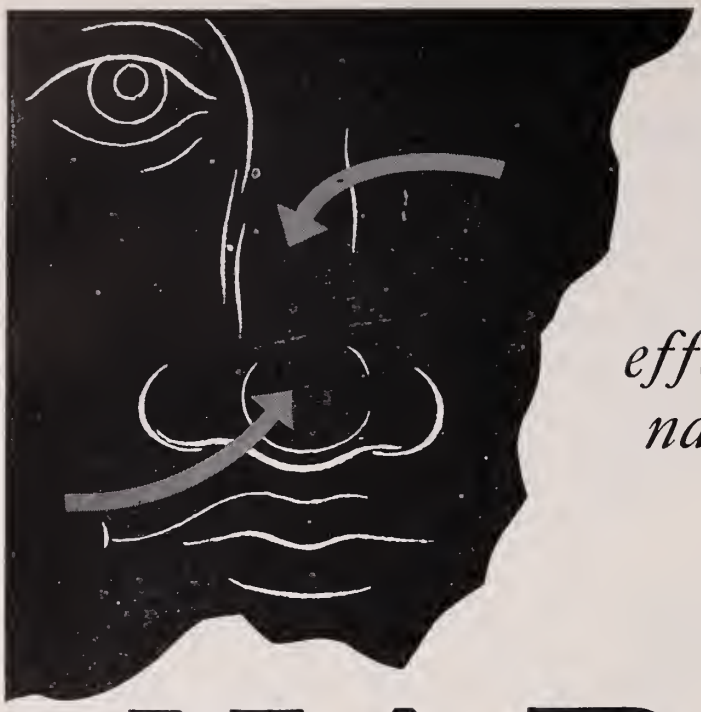
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Pyrilamine Maleate U.S.P.	25 mg.	45 mg.

*Timed Disintegration Capsule affords up to 8 hours relief.

DOSAGE: 1 to 2 tablets p.c. Children 1 tablet, p.c. or 1 capsule b.i.d., 12 hours apart (adults)

SUPPLIED: Bottles of 100 green tablets or orange T.D. Capsules

REFER TO PDR
PAGE 825

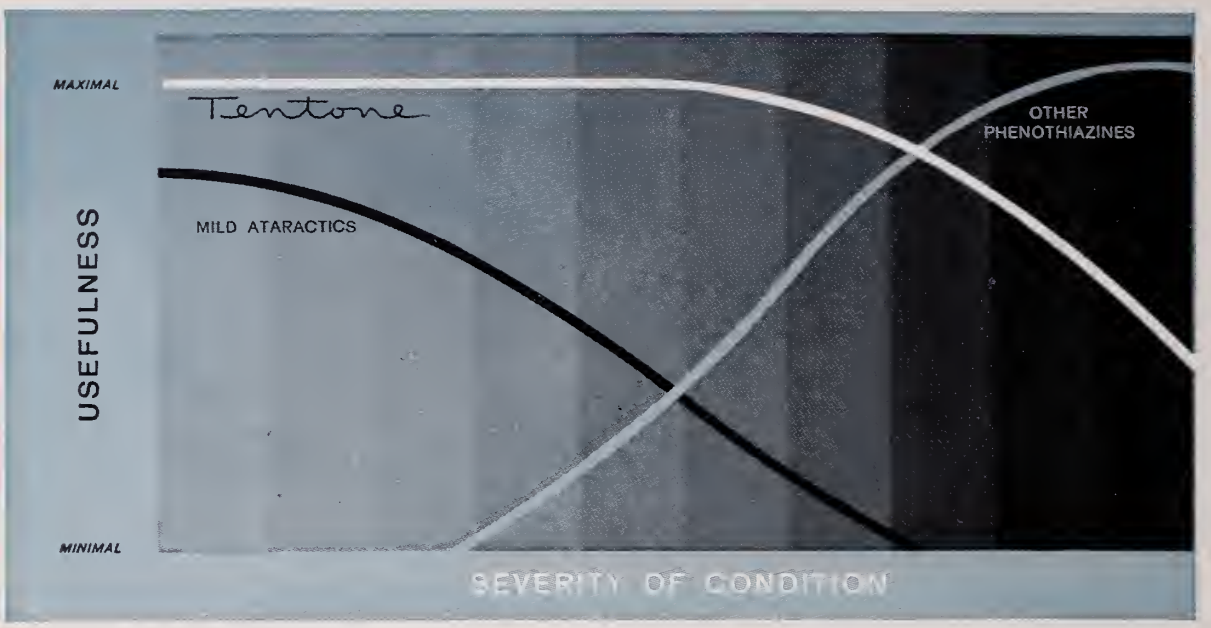
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THE TILDEN COMPANY • New Lebanon, N.Y.
Oldest Manufacturing Pharmaceutical House in America • Founded 1824

ANNOUNCING



A HIGHLY EFFECTIVE TRANQUILIZER FOR EXTENDED OFFICE PRACTICE USE



POSITIVE CALMING ACTION ADAPTED FOR LOWER RANGE OF EMOTIONAL DISORDERS

The development of TENTONE® Methoxypromazine Maleate *Lederle* does not duplicate primary function of existing tranquilizers. TENTONE fills the need for a practical, potent agent for extended use in everyday practice (as illustrated above).

Action of TENTONE Methoxypromazine Maleate approaches that of the strong phenothiazines without their drawbacks. Calming response is positive and rapidly apparent to both patient and physician. However, as a basic phenothiazine modification, TENTONE allows full therapeutic application in the mild and moderate range of anxiety-tension and somapsychic disorders most usually seen in general practice.

EXCELLENT TOLERATION— MARKED REDUCTION IN COMPLICATIONS

Incidence of untoward reactions is exceptionally low and approximates the mild ataractic drugs. Reduction in sensitivity reaction, intestinal distress, blood, brain or liver toxicity is striking, particularly in the low dosage range. TENTONE exhibits greater freedom from depression and drug habituation. Physical and psychic orientation is usually preserved. Occasional drowsiness may be encountered, particularly in higher dosages. In moderate to more severe cases, this sedative effect may be desired.

TENTONE has thus been described as one of the easiest tranquilizers to handle in office practice. In indicated cases, the physician may be relieved of the patient's unnecessary concern over his own illness. In contrast to the previous types of drugs, complaints over induced distress or inadequate benefit are rare.

WHEN MORE THAN MILD SEDATIVE EFFECT IS DESIRED

Consequently, TENTONE is more useful than other ataractic drugs in two areas: (1) mild to moderate conditions—when more than mild sedative effect is sought, (2) middle range of moderate to severe cases—when less than psychopathology is involved.

Indications include ■ common anxiety-tension states ■ obsessive-compulsive behavior ■ neurosis ■ depression ■ situational anxiety and hysteria

And the emotional components of: ■ agitation ■ restlessness ■ tremors ■ insomnia ■ alcohol- and drug-withdrawal syndrome ■ hyperkinesis ■ prenatal anxiety ■ rheumatic disorders ■ dermatoses ■ menopausal syndrome ■ premenstrual tension ■ peptic ulcer, other g.i. disorders ■ asthma, other allergy ■ multiple sclerosis, arteriosclerosis ■ malignancy, other progressive diseases

POSSIBLE POTENTIATION OF ANALGESICS AND NARCOTICS

Since tranquilizing drugs may potentiate the action of pain-relievers, sedatives, and barbiturates, they should be used with caution in conjunction with them, or to achieve a greater response to these drugs in various conditions when desired. They may also be useful in reduction of effective dosage to better tolerated, or non-habituating levels.

ADAPTABLE LOWER DOSAGE RANGES

Dosage must be individualized to severity of condition and response desired.

In mild to moderate cases: varies from 30 to 100 mg. daily.

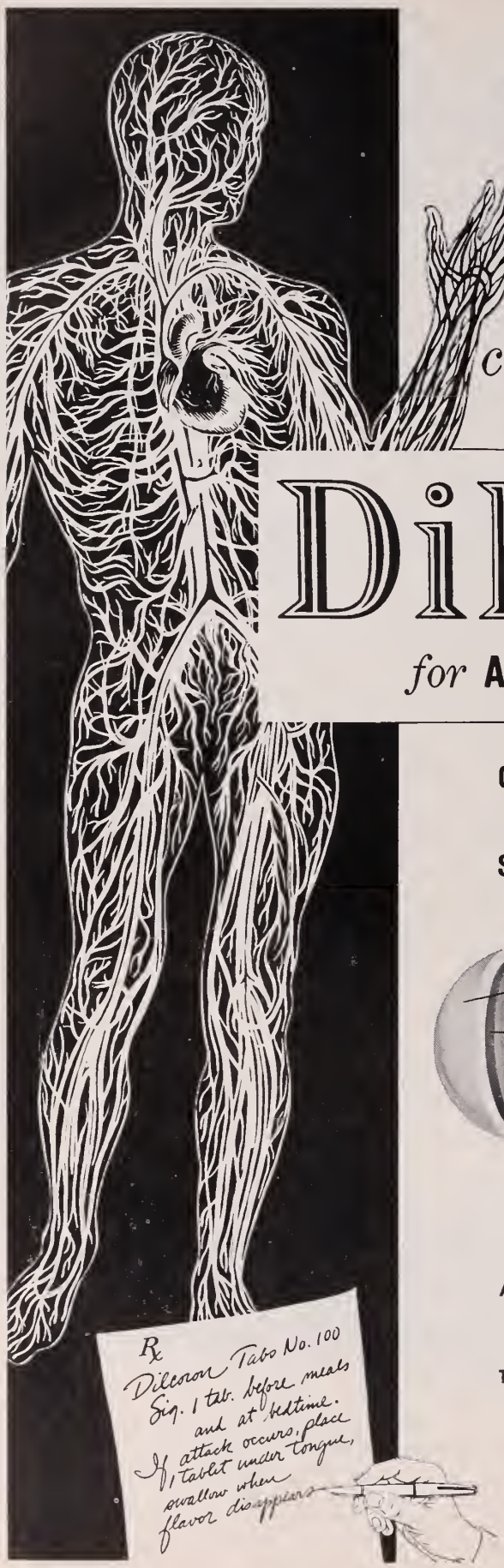
In moderate to severe cases: from 75 to 500 mg. daily.

In psychotic or institutionalized patients, TENTONE may be useful as a substitute when toxicity precludes effective dosage of other phenothiazines, or as maintenance after hospitalization. Dosage may range from 100 to 1500 mg. daily in divided doses.

Supplied: 10 mg., 25 mg. and 50 mg. tablets



Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.



NEW

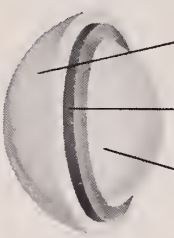
"flavor-timed"
dual-action
coronary vasodilator

Dilcoron®

for **ANGINA PECTORIS**

ORAL *(tablet swallowed whole)*
for dependable prophylaxis

SUBLINGUAL-ORAL
for immediate and sustained relief



Nitroglycerin
—0.4 mg. (1/150 grain)—acts quickly

Citrus "flavor-timer"
—signals patient when to swallow

Pentaerythritol tetranitrate
—15 mg. (1/4 grain)—prolongs action

For continuing prophylaxis patient swallows the entire Dilcoron tablet on an empty stomach.

Bottles of 100.

Average prophylactic dose:
1 tablet four times daily
(½ hour before meals and at bedtime).

Therapeutic dose:
1 tablet held under the tongue until citrus flavor disappears, then swallowed.

Winthrop LABORATORIES
NEW YORK 18, N. Y.

only one Schering Repetab will give your patient



NONSTOP RELIEF FROM NEW YORK TO ISTANBUL

When you prescribe medication in convenient REPETAB form, one REPETAB taken just before his jet flight leaves New York's Idlewild Airport will give your patient the benefits of the first full dose almost as swiftly as his plane soars up and out over the Atlantic. He'll enjoy a single, sustained high therapeutic level for up to 12 hours as his modern plane carries him smoothly over the 5,009 miles. And he can relax until he settles down to shish kebab at Pandeli's 12 hours later....That 12-hour flight to Istanbul is just over the horizon. Modern, dependable REPETABS are here now!

You can prescribe these Schering products in REPETAB *form*

CHLOR-TRIMETON® REPETABS, 8 and 12 mg.
Chlorprophenpyridamine Maleate

TRILAFON® REPETABS, 8 mg.
perphenazine

POLARAMINE* REPETABS, 6 mg.
dextro-chlorpheniramine maleate

PRANTAL® REPETABS, 100 mg.
diphemanil methylsulfate

GYNETONE® REPETABS, .02 and .04 mg.
combined estrogen-androgen

DEMAZIN® REPETABS, 4 mg.
Chlor-Trimeton plus phenylephrine

symbol of the one-dose convenience you want for your patient

REPETABS,® Repeat Action Tablets.

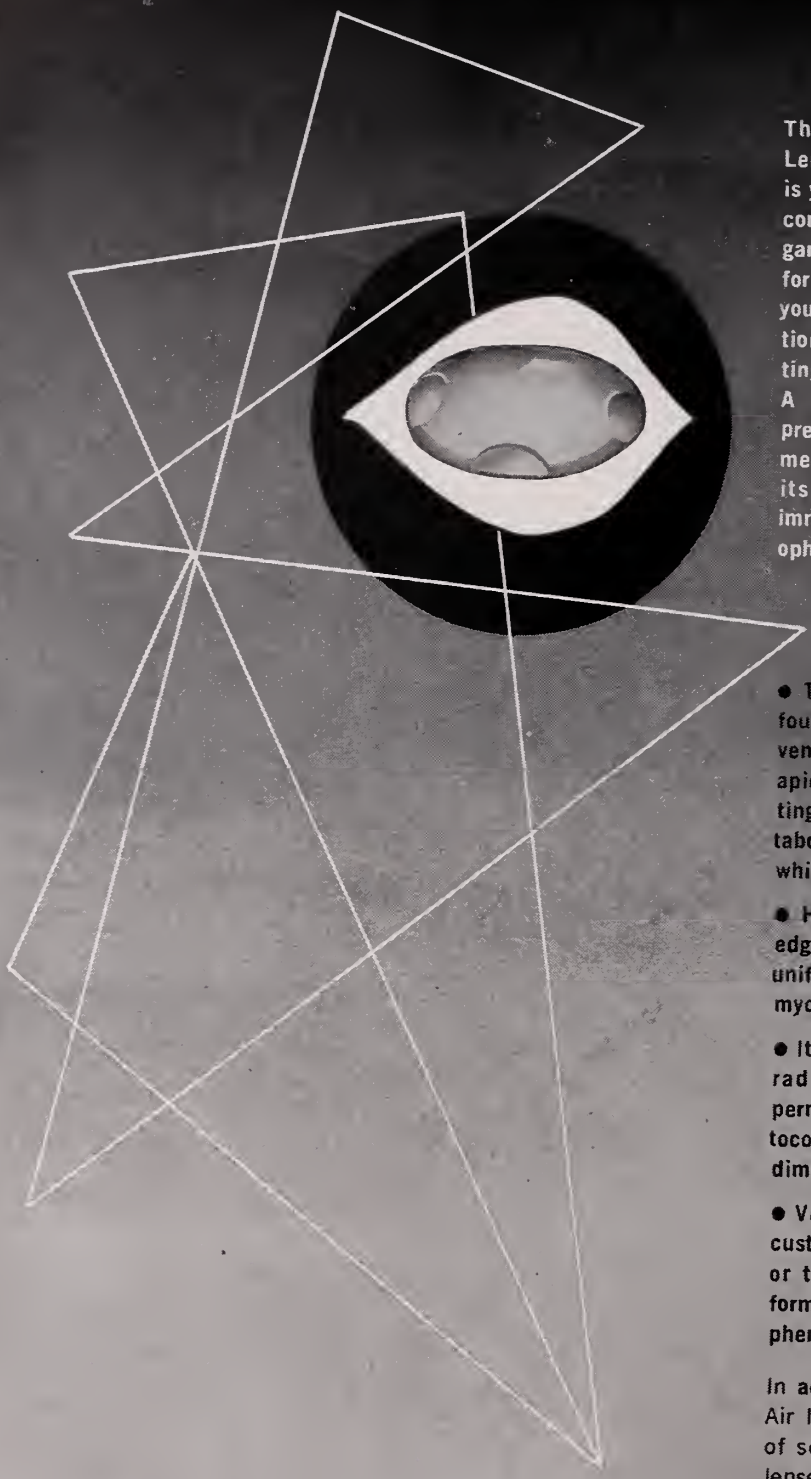
PROMPT REPETAB RELIEF • LASTS ALL DAY OR NIGHT •

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The Vent-Air Contact Lens Center in your area is your referral office for: complete information regarding contact lenses... for the precise filling of your patients' prescriptions . . . and for the fitting of all contact lenses. A complete service expressly planned for the medical profession and its patients under the immediate aegis of the ophthalmologist.

- The Vent-Air lens offers four unique peripheral vents and proper corneal apical clearance permitting normal corneal metabolism and oxygenation while fitting securely.
- Hyper-thinness of the edge or center provides uniform thickness in high myopia or aphakia.
- Its wide range of inner radii (5.0 to 10.00mm) permits extremes of keratoconic and megaloglobic dimensions to be fitted.
- Vent-Air lenses are custom-fitted in uni-, bi-, or tri-curve radii conforming to corneal peripheral asphericities.

In addition to the Vent-Air lens, all other types of scleral and corneal lenses are available to meet your patients' individual needs.

VENT-AIR CONTACT LENS LABORATORIES • NEW YORK 36, N.Y.
Write for the address of center nearest you.

Antivert® stops



VERTIGO

VERTIGO

Each ANTIVERT *tablet contains:*

Meclizine (12.5 mg.)—most effective antihistaminic to control vestibular dysfunction.[1]

Nicotinic acid (50 mg.)—the drug of choice for prompt vasodilation.[2,3]

Advantage of "dual therapy" confirmed:

Menger found ANTIVERT "improved or controlled symptoms in virtually 90% of vertiginous patients."[2]

Indications: Meniere's syndrome, arteriosclerotic vertigo, labyrinthitis, and streptomycin toxicity. Also effective in recurrent headache, including migraine.

Dosage: one tablet before each meal.

Supplied: bottles of 100 blue-and-white scored tablets. Prescription only.

References: 1. Charles, C. M.: Geriatrics *2*:110 (March) 1956. 2. Menger, H. C.: Clin. Med. *4*:313 (March) 1957. 3. Shuster, B. H.: M. Clin. North America *40*:1787 (Nov.) 1956.

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Division, Chas. Pfizer & Co., Inc.
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Science for the world's well-being

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ONE OF THE

MOST

SIGNIFICANT IMPROVEMENTS

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ANTACID

THERAPY

SINCE THE INTRODUCTION OF ALUMINUM HYDROXIDE

IN 1929

NEW

CREAMALIN®

ANTACID TABLETS

Each Creamalin Antacid Tablet contains 320 mg. specially processed, highly reactive, short polymer dried aluminum hydroxide gel, stabilized with hexitol, with 75 mg. magnesium hydroxide.

1. *Neutralizes acid faster (quicker relief)*
2. *Neutralizes more acid (greater relief)*
3. *Neutralizes acid longer (more lasting relief)*
4. *No constipation · No acid rebound*
5. *More pleasant to take*

If one . . . or all . . . needs nutritional support . . .



they
deserve

GEVRAL®

capsules—14 VITAMINS AND 11 MINERALS

Vitamin-Mineral Supplement Lederle

For Complete Formula see PDR (Physicians' Desk Reference), page 689

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

The results of administering Delalutin before the 12th week of gestation to 82 women with habitual abortion were reported recently by Reifenstein.[1] Every patient had experienced at least three consecutive abortions immediately preceding the treated pregnancy. More than 68% of these women were delivered successfully and uneventfully following Delalutin therapy.

Boschann,[2] in a study of pregnancies with threatened abortion, found that:

37% of 73 pregnancies were carried to term without progestational therapy
64% of 42 pregnancies were salvaged by progesterone
83% of 73 pregnancies were salvaged by Delalutin

Eichner,[3] found that with Delalutin fetal salvage of infants below term weight (1000 to 2000 gm.) was significantly improved.
108 (76%) of 142 babies of this birth weight survived without progestational therapy.
16 (100%) of 16 babies of this birth weight survived with Delalutin therapy.
A comparison study was made of a group of repeated aborters treated with Delalutin, and a group with a similar history treated with bed rest and sedation.[4] Pregnancy salvage with Delalutin was twice that of the control group. Delalutin was found to be "highly active," well-tolerated and long-acting.

Delalutin offers these advantages over other progestational agents:

- longer-acting and more sustained therapy
- more effective in producing and maintaining a completely matured secretory endometrium
- no androgenic effect
- more concentrated solution requires injection of less vehicle
- unusually well-tolerated, even in large doses
- requires fewer injections
- low viscosity makes administration easier

DELALUTIN is also potent and safe therapy for: threatened abortion; postpartum after-pains; amenorrhea, primary and secondary; dysfunctional uterine bleeding not associated with genital malignancy; infertility with inadequate corpus luteum function; production of secretory endometrium and desquamation during estrogen therapy; premenstrual tension; dysmenorrhea; cyclomastopathy, mastodynia, adenosis and chronic cystic mastitis.

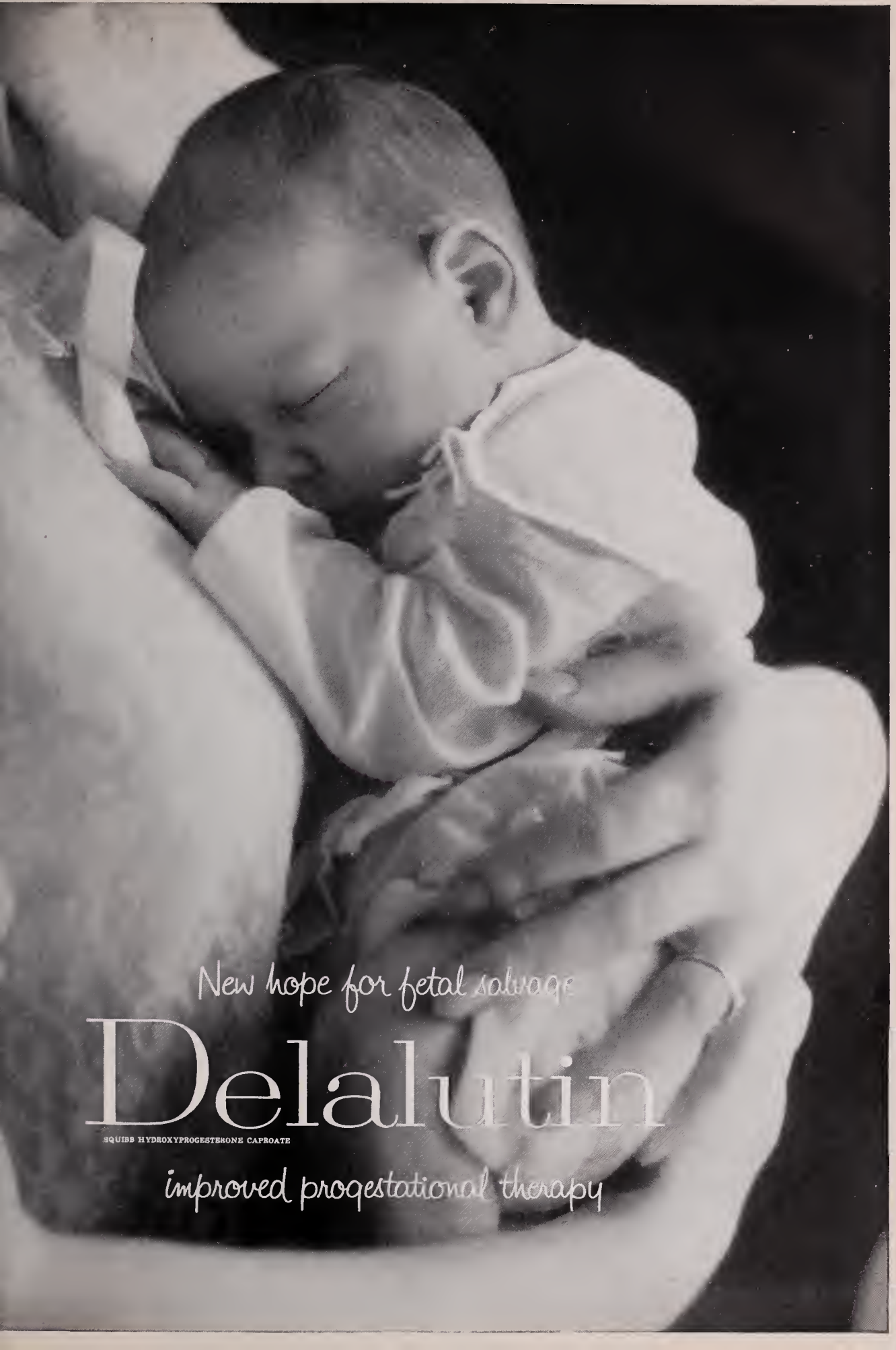
Administration and Dosage: Because of its low viscosity, Delalutin may be administered with a small gauge needle (deep intragluteal injection). Complete information on administration and dosage is supplied in the package insert.

Supply: Delalutin is available in vials of 2 and 10 cc., each cc. containing 125 mg. of hydroxyprogesterone caproate in sesame oil, and benzyl benzoate.

References: 1. Reifenstein, E. C., Jr.: *Annals N. Y. Acad. Sci.* 71:762 (July 30) 1958. 2. Boschann, H-W.: *ibid.*, p. 727. 3. Eichner, E.: *ibid.*, p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: *Am. J. Obst. and Gyn.* 76:279, 1958.

SQUIBB *Squibb Quality—the Priceless Ingredient*

'Delalutin'® is a Squibb trademark


New hope for fetal salvage
Delalutin
SQUIBB HYDROXYPROGESTERONE CAPROATE
improved progestational therapy


No
turned-up noses
at this
new Erythrocin
suspension

a new derivative of Erythromycin designed especially for children

CITRUS-FLAVORED

ERYTHROCIN®

ETHYL SUCCINATE

ORAL SUSPENSION

Never a flavor like this in an antibiotic suspension. A new achievement in pharmaceutical elegance—a ready-mixed, stable suspension so sweet and good you can't tell it's "medicine."

No bitterness, no unpleasant aftertaste—just pure, sweet citrus flavor.

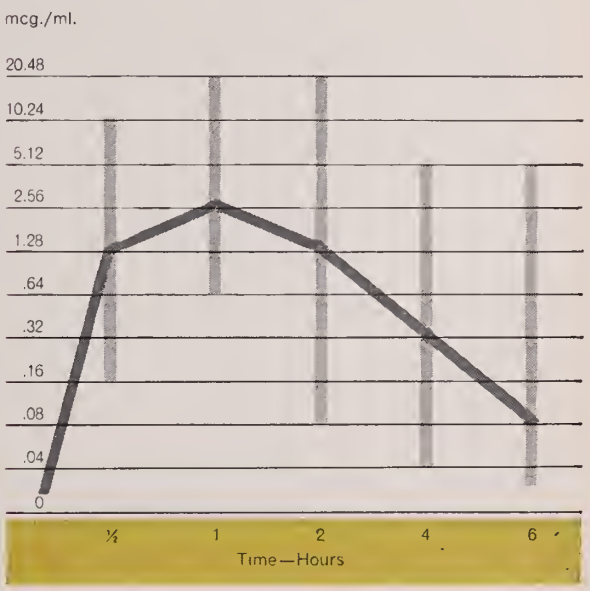
Never an antibiotic better proved against everyday coccal infections. After millions of prescriptions, an unparalleled safety record.

High, peak blood levels within one hour—plus nearly 100% effectiveness against coccal infections. And, unlike broad-spectrum antibiotics, ERYTHROCIN is classed as a bactericidal agent.

Indications: Against staph-, strep- and pneumococci. Especially useful when patients are allergic to penicillin or other antibiotics. **Dosage:** For children, 30 mg./Kg. per day. Adults, 1 to 2 Gm., depending on severity of infection. **Supplied:** In 60-cc., pour-lip bottles. Each 5-cc. teaspoonful represents 200 mg. of Erythrocin. Abbott

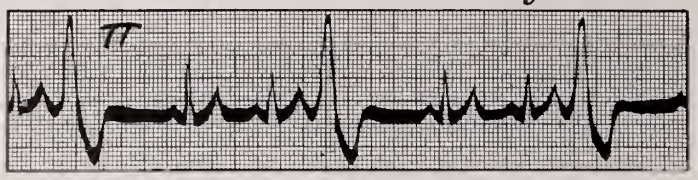
If you're concerned with blood levels . . .

Range of blood levels obtained from one dose of 400 mg. ERYTHROCIN SUSPENSION. Medication was administered to 30 volunteer adults, and represents a dosage of approximately 6 mg./Kg. Bars show ranges —continuous line indicates medians.

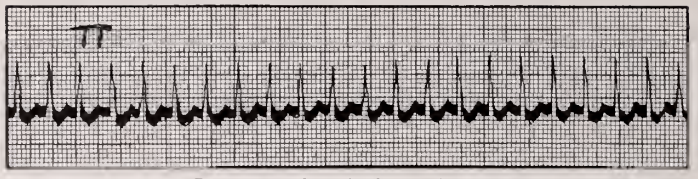


®ERYTHROCIN—ERYTHROMYCIN, ABBOTT 905105

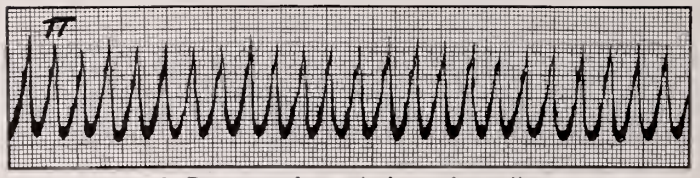
restore normal sinus rhythm



1. Premature ventricular contractions



2. Paroxysmal auricular tachycardia



3. Paroxysmal ventricular tachycardia

in arrhythmias

VISTARIL

hydroxyzine pamoate *

More than a tranquilizer

SPECIFIC ANTIARRHYTHMIC EFFECT

Vistaril is effective in ventricular extrasystoles and paroxysmal tachycardias (both auricular and ventricular).

plus

PSYCHOTHERAPEUTIC POTENCY

proven calming action indicated for arrhythmia patients.

and

THE OUTSTANDING SAFETY

of Vistaril as compared to other antiarrhythmic drugs in general use has been noted by investigators.

THE FOLLOWING DOSAGE REGIMEN IS RECOMMENDED

(individualized by the physician for maximum effectiveness):

PARENTERAL DOSAGE: 50-100 mg. (2-4 cc.) I.M. stat., and q. 4-6 h., p.r.n.; maintain with 25 mg. b.i.d. or t.i.d. In acute emergency, 50-75 mg. (2-3 cc.) I.V. stat.; maintain with 25-50 mg. (1-2 cc.) I.V. q. 4-6 h., p.r.n.

ORAL DOSAGE: Initially, 100 mg. daily in divided doses until arrhythmia disappears. For maintenance or prophylaxis, 50-75 mg. daily in divided doses.

SUPPLY: Vistaril Capsules, 25 mg., 50 mg. and 100 mg. Vistaril Parenteral Solution, 10 cc. vials and 2 cc. Steraject® Cartridges. Each cc. contains 25 mg. (as the hydrochloride).

Pfizer *Science for the world's well-being*

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

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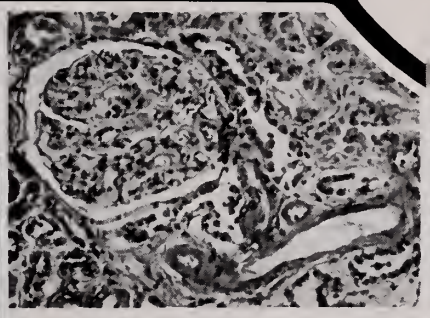
References: 1. Burrell, Z. I., et al.: Am. J. Cardiol., 1:624 (May) 1958. 2. Hutcheon, D. E., et al.: J. Pharmacol. & Exper. Therap., 118:451 (Dec.) 1956.

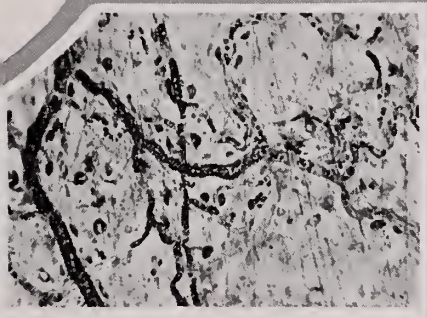
SQUIBB ANNOUNCES

NEW

RAUTRAX

RAUDIXIN
Squibb Standardized
Whole Root Rauwolfia Serpentina
FLUMETHIAZIDE
POTASSIUM CHLORIDE





A LOGICAL COMBINATION **RAUDIXIN** ENHANCED
BY AN ENTIRELY NEW DIURETIC — **FLUMETHIAZIDE**

THUS SQUIBB OFFERS YOU GREATER LATITUDE IN SOLVING THE PROBLEM OF

HYPERTENSION

WITHOUT FEAR OF SIGNIFICANT POTASSIUM DEPLETION[1-3]

Rautrax combines Raudixin with flumethiazide — *the new, safe nonmercurial diuretic* — for control of all degrees of hypertension. Clinicians report it safely and rapidly eliminates excess extracellular sodium and water without potassium depletion.[1-3] Potassium loss is less than with any other nonmercurial diuretic.[1] Moreover, the inclusion of supplemental potassium chloride in Rautrax provides added protection against potassium and chloride depletion in the long-term management of hypertension.

Through this dependable diuretic action of flumethiazide, the clinical and subclinical edema — so often associated with cardiovascular disease — is rapidly brought under control.[2-5] And once Rautrax has brought the fluid balance within normal limits, continued administration does not appreciably alter the normal serum electrolyte pattern. Flumethiazide also potentiates the antihypertensive action of Raudixin. By this unique dual action, a lower dosage of each ingredient effectively maintains safe antihypertensive therapy.

Dosage: 2 to 6 tablets daily in divided doses initially; may be adjusted within range of 1 to 6 tablets daily in divided doses. **Note:** In hypertensive patients already on ganglionic blocking agents, veratrum and/or hydralazine, the addition of Rautrax necessitates an immediate dosage reduction of these agents by at least 50%. A similar reduction is necessary when these agents are added to the Rautrax regimen.

Supply: Capsule-shaped tablets supplying 50 mg. of Raudixin, 400 mg. of flumethiazide, and 400 mg. of potassium chloride, bottles of 100.

References: 1. Moyer, J. H., and others: Am. J. Cardiol., 3:113 (Jan.) 1959. • 2. Bodi, T., and others: To be published, Am. J. Cardiol., (April) 1959. • 3. Fuchs, M., and others: Monographs on Therapy, 4:43 (April) 1959. • 4. Montero, A. C.; Rochelle, J. B., III, and Ford, R. V.: To be published. • 5. Rochelle, J. B., III; Montero, A. C., and Ford, R. V.: To be published.

LITERATURE AVAILABLE ON REQUEST.

'RAUDIXIN®' AND 'RAUTRAX' ARE SQUIBB TRADEMARKS

SQUIBB Squibb Quality — the Priceless Ingredient

BONADOXIN®

(tablets and drops)

STOPS STOPS STOPS MORNING SICKNESS



BONADOXIN Tablets relieve nausea and vomiting of pregnancy in 9 out of 10,[1-7] often within a few hours.

Moreover, a controlled study of 620 cases reported that with BONADOXIN "toxicity and intolerance [are] zero."[1] BONADOXIN is rarely soporific. It is free from the risks associated with overpotent tranquilizer-antinauseants.

NOTE: BONADOXIN has also been shown highly effective in relieving nausea and vomiting associated with: anesthesia, radiation sickness, Meniere's syndrome, labyrinthitis, cerebral arteriosclerosis, and motion sickness.

Each tiny pink-and-blue BONADOXIN tablet contains:

Meclizine HCl (25 mg.) . . . for antivertiginous, antinauseant effects.

Pyridoxine HCl (50 mg.) . . . for specific metabolic replacement.

DOSAGE: usually one tablet at bedtime. Severe cases may require another dose on arising.

SUPPLIED: tiny pink-and-blue tablets, bottles of 25 and 100. Fruit-flavored, clear green syrup in 30 cc. dropper bottles.

Infant colic? BONADOXIN DROPS are antispasmodic...stop colic in 84%,[8-10] without the risk of belladonna and barbiturates.

Each cc. contains:
Meclizine dihydrochloride . . 8.33 mg.
Pyridoxine hydrochloride . . .16.67 mg.

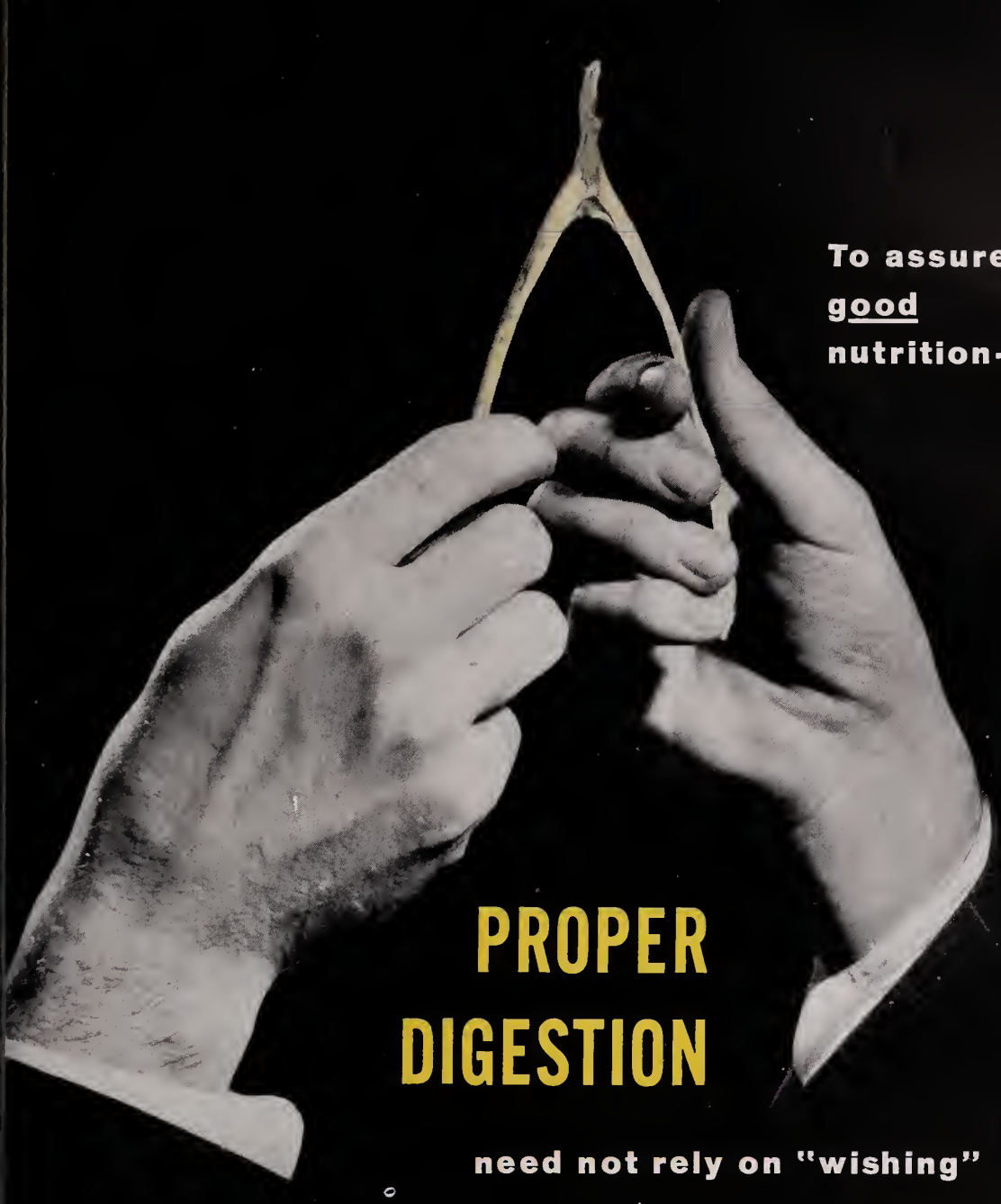
Dosage:

under 6 months	0.5 cc.	2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years	1.5 to 2 cc.	
2 to 6 years . .	3 cc.	
adults and children over 6	1 tsp. (5 cc.)	

References: 1. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957. 2. Groskloss, H. H., et al.: Clin. Med. 2:885 (Sept.) 1955. 3. Weinberg, A., and Werner, W. E. F.: Am. Pract. & Digest Treat. 6:580 (April) 1955. 4. Crawley, C. R.: West. J. Surg. 8:463 (Aug.) 1956. 5. Tartikoff, G.: Clin. Med. 3:223 (March) 1955. 6. Dunn, R. D., and Fox, L. P.: Clinical exhibit. 7. Codling, J. W., and Lowden, R. J.: Northwest Med. 57:331 (March) 1958. 8. Dougan, H. T.: Personal communication. 9. Leonard, C. L.: Personal communication. 10. Steinberg, C. L.: Personal communication.

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Science for the World's Well-Being



To assure good nutrition—

PROPER DIGESTION

need not rely on "wishing"

Each double-layered Entozyme tablet contains:

Pepsin, N.F. ..... 250 mg.
—released in the stomach from gastric-soluble outer coating of tablet.

Pancreatin, U.S.P. ..... 300 mg.

Bile Salts ..... 150 mg.
—released in the small intestine from enteric-coated inner core.

A. H. ROBINS CO., INC.
Richmond 20, Virginia
Ethical Pharmaceuticals of Merit since 1878

As a comprehensive supplement to deficient natural secretion of digestive enzymes, particularly in older patients, ENTOZYME effectively improves nutrition by bridging the gap between adequate ingestion and proper digestion. Among patients of all ages, it has proved helpful in chronic cholecystitis, post-cholecystectomy syndrome, subtotal gastrectomy, pancreatitis, dyspepsia, food intolerance, flatulence, nausea and chronic nutritional disturbances.

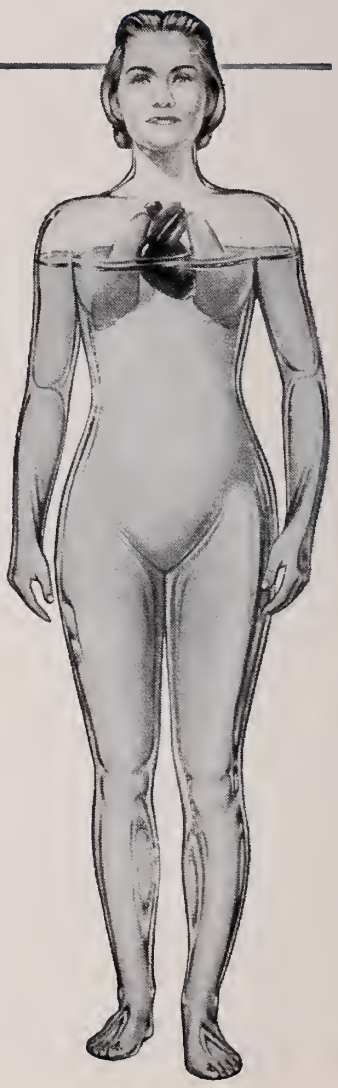
For comprehensive digestive enzyme replacement—

ENTOZYME®

Robins

From basic research—basic progress

A NEW MEASURE OF ACTIVITY



IN EDEMA:

- shows greater oral effectiveness than any other class of diuretic agent
- each 25 mg. HYDRODIURIL orally is equivalent to 1.6 cc. meralluride I.M.
- has been reported to be effective even in patients who do not respond satisfactorily to other diuretics
- has prompt onset of action with diuretic effectiveness maintained even on prolonged daily administration
- low toxicity—extremely well tolerated
- often achieves the benefits of a low salt diet without the unpleasant restriction

Indications: Hypertension, congestive heart failure of all degrees of severity, premenstrual syndrome (edema), edema and toxemia of pregnancy, renal edema—nephrosis, nephritis; cirrhosis with ascites, drug-induced edema, and as adjunctive therapy in the management of obesity complicated by edema.

dosage: In edema—one or two 50 mg. tablets of HYDRODIURIL once or twice a day.

In hypertension—one or two 25 mg. tablets or one 50 mg. tablet HYDRODIURIL once or twice a day.

supplied: 25 mg. and 50 mg. scored tablets HYDRODIURIL (Hydrochlorothiazide) in bottles of 100 and 1,000.

*HYDRODIURIL and DIURIL are trademarks of Merck & Co., INC.

Additional information on HYDRODIURIL is available to the physician on request.

bibliography: 1. Esch, A. F., Wilson, I. M. and Freis, E. D.: 3,4-Dihydrochlorothiazide: Clinical Evaluation of a New Saluretic Agent. Preliminary Report; M. Ann. District of Columbia **28**:9, (Jan.) 1959. 2. Ford, R. V.: The Clinical Pharmacology of Hydrochlorothiazide; Southern Med. J. **52**:40, (Jan.) 1959. 3. Fuchs, M., Bodi, T., Irie, S. and Moyer, J. H.: Preliminary Evaluation of Hydrochlorothiazide ('HYDRODIURIL'); M. Rec. & Ann. **51**:872, (Dec.) 1958. 4. Moyer, J. H., Fuchs, M., Irie, S. and Bodi, T.: Some Observations on the Pharmacology of Hydrochlorothiazide; Am. J. Cardiol. **3**:113, (Jan.) 1959.

HYDRODIURIL (HYDROCHLOROTHIAZIDE)

- highly-active derivative of chlorothiazide
- qualitatively similar to DIURIL® but at least 10 to 12 times more potent by weight
- loss of potassium is clinically insignificant in the great majority of patients on normal diets

HYDRODIURIL*

NEW RELEASE

HYDROCHLOROTHIAZIDE

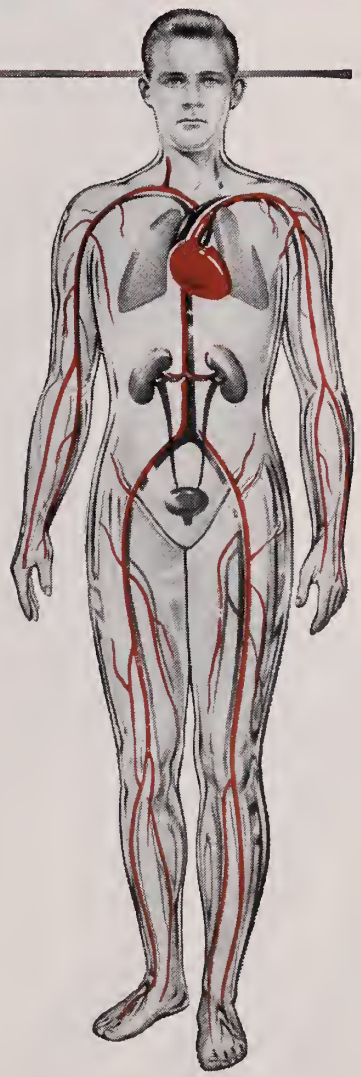
IN HYPERTENSION:

- effective by itself in some patients—markedly potentiates other antihypertensive agents
- provides background therapy to improve and simplify the management of all grades of hypertension
- has been reported by some investigators to have a greater antihypertensive effect in some patients than chlorothiazide at equivalent dosage
- does not lower blood pressure in normotensives
- reduces dosage requirements for other antihypertensive agents, often with concomitant reduction in their distressing side effects
- smooths out blood pressure fluctuations

precautions: It is important that the dosage be adjusted as frequently as the needs of the individual patient demand. When HYDRODIURIL is used with a ganglion blocking agent, it is mandatory to reduce the dose of the latter by at least 50 per cent, immediately upon adding HYDRODIURIL to the regimen.

HYDRODIURIL has shown no adverse effects on renal function; for this reason it may be used with excellent results even in patients for whom the organomercurials are contraindicated because of renal damage.

The excretion of potassium is much lower than that of sodium or chloride and, as is the case with DIURIL®, the loss of potassium is clinically insignificant in the great majority of patients on normal diets. If indicated, potassium loss may easily be replaced by including potassium-rich foods in the diet (orange juice, bananas, etc.).



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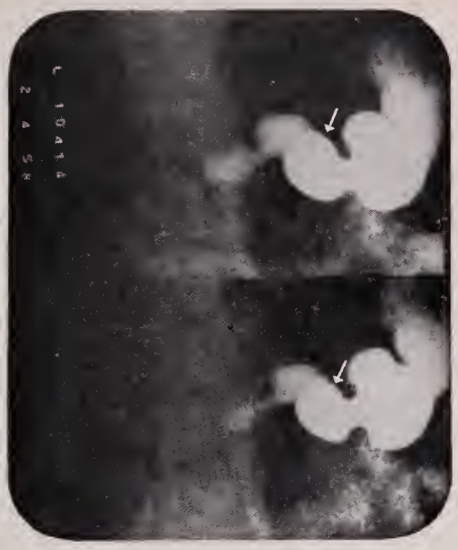
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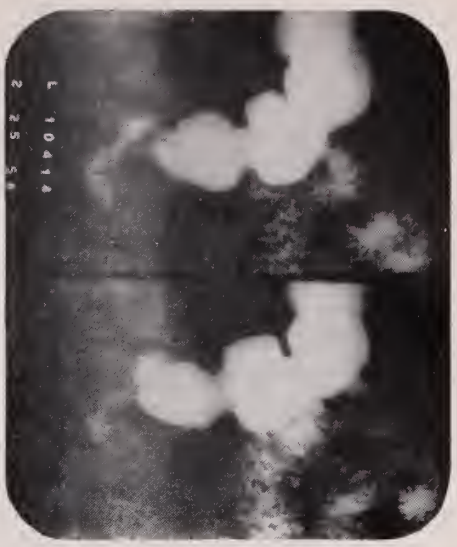
relieve the tension



—and control its G.I. sequelae



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Intermittent crises of severe pain over 2 year period; hospital management with Sippy regimen provided relief of symptoms; however, symptoms recurred after each sojourn.



PATHIBAMATE *(Tabs. j t.i.d. and H.S.)*; prompt relief of symptoms. Radiograph (21 days later) confirms healing of minute lesser curvature gastric ulcer crater.

predictable results in the control of tension and G.I. trauma

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Supplied:
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INDICATED IN:

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SPRAINS

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FIBROSITIS

FIBROMYOSITIS

LOW BACK PAIN

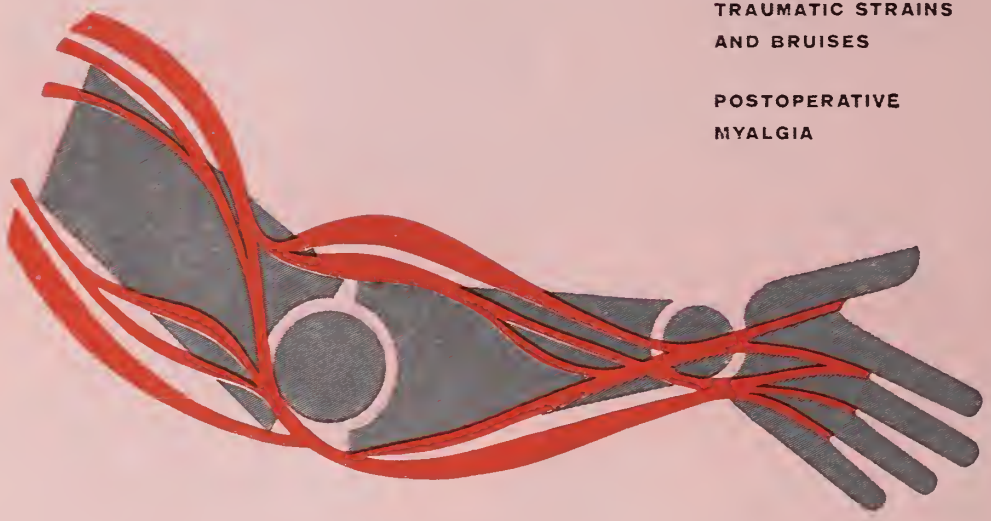
DISC SYNDROME

SPRAINED BACK

"TIGHT NECK"

TRAUMATIC STRAINS AND BRUISES

POSTOPERATIVE MYALGIA



■ Exhibits unusual analgesic properties, different from those of any other drug ■ Specific and superior in relief of SOMAtic pain ■ Modifies central perception of pain without abolishing natural defense reflexes ■ Relaxes abnormal tension of skeletal muscle

SOMA™

N-isopropyl-2-methyl-2-propyl-1, 3-propanediol dicarbamate

■ More specific than salicylates ■ Less drastic than steroids

■ More effective than muscle relaxants

SOMA has an unique analgesic action. It apparently modifies central pain perception without abolishing peripheral pain reflexes. SOMA is particularly effective in relieving joint pain. Patients say that they feel better and sleep better with SOMA than with any previously used analgesic, sedative or relaxant drug.
SOMA also relaxes muscle hypertonia, with its stresses on related joints, ligaments and skeletal structures.

ACTS FAST. Pain-relieving and relaxant effects start in 30 minutes and last 6 hours.

NOTABLY SAFE. Toxicity of SOMA is extremely low. No effects on liver, endocrine system, blood pressure, blood picture or urine have been reported. Some patients may become sleepy on high dosage.

EASY TO USE. Usual adult dose is one 350 mg. tablet 3 times daily and at bedtime.

SUPPLIED: Bottles of 50 white sugar-coated 350 mg. tablets.

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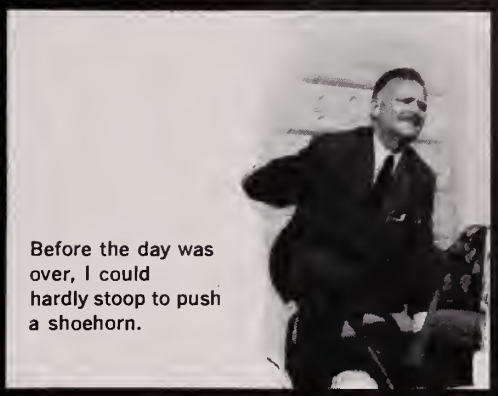
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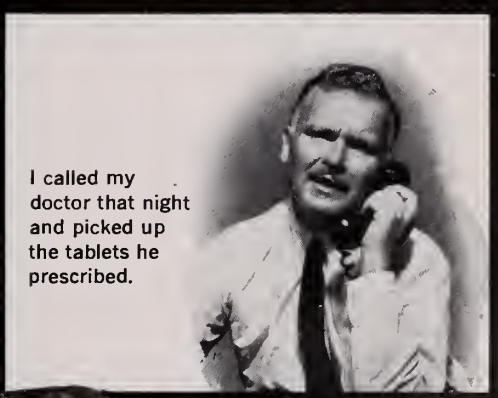
REACHING FOR THOSE 9B's NEARLY PUT ME ON THE SHELF...



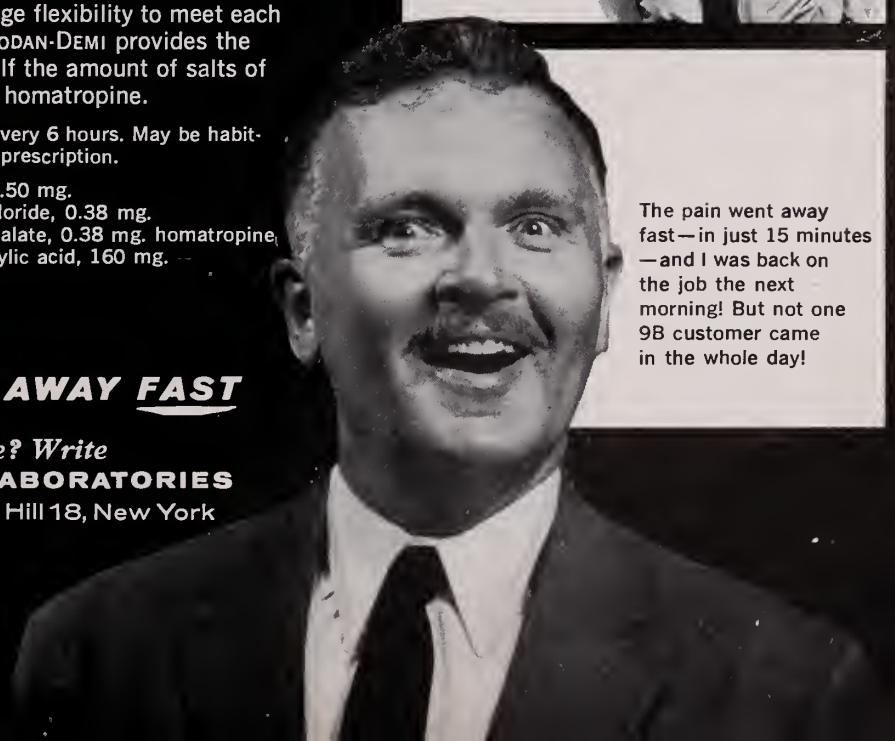
Reaching for 9B shoes and other top shelf sizes is no joke . . . it gave me a terrible kink in my back.



Before the day was over, I could hardly stoop to push a shoehorn.



I called my doctor that night and picked up the tablets he prescribed.



The pain went away fast—in just 15 minutes—and I was back on the job the next morning! But not one 9B customer came in the whole day!

Percodan®-Demi & Percodan® *Tablets*

Salts of Dihydrohydroxycodeinone and Homatropine, plus APC

FOR PAIN

ACTS FASTER — usually within 5-15 minutes. **LASTS LONGER** — usually 6 hours or more. **MORE THOROUGH RELIEF** — permits uninterrupted sleep through the night. **RARELY CONSTIPATES** — excellent for chronic or bedridden patients. **VERSATILE** — new "demi" strength permits dosage flexibility to meet each patient's specific needs. PERCODAN-DEMI provides the PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Federal law permits oral prescription.

Each PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. phenacetin, and 32 mg. caffeine.

AND THE PAIN WENT AWAY FAST

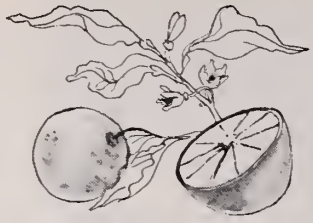
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Literature? Write
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Richmond Hill 18, New York

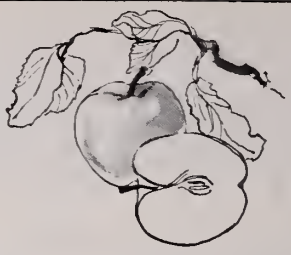
*U.S. Pat. 2,628,185



Dates



Oranges



Apples



Beets



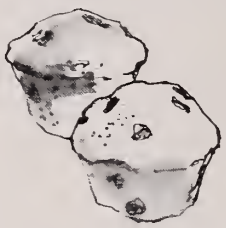
Liquids



Carrots

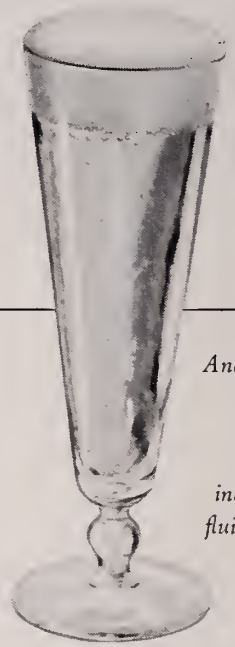


Whole Grains



Raisin Oatmeal Muffins

Bulk—rough or gentle—
makes the "Regularity" diet work!



And may we suggest a glass of beer to increase the fluid intake?

The "Regularity" Diet

● Fruits and vegetables, raw or cooked, are high in cellulose. Oranges and apples, beets and carrots also provide pectin which absorbs more fluid to form especially smooth bulk.

Whole grains contain cellulose and Vitamin B Complex as well. Lots of liquid is important to make the cellulose bulky—about 8 to 10 glasses a day. And some of it might be beer.*

For appetite appeal your patient can team apples with dates. Raisins or fresh cranberries make a tasty surprise in oatmeal muffins.

When your patient makes these bulk-producing foods appetizing, he's likely to include them in his regular diet.

*An 8-oz. glass of beer supplies about ⅛ the minimum requirement of Niacin as well as smaller amounts of other B Complex vitamins. (Average of American beers)

United States Brewers Foundation
Beer—America's Beverage of Moderation

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Bed of Digitalis purpurea
with Campanula (Canterbury Bells) in foreground

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Customarily, a minimum requirement of 50% participation of the eligible membership is necessary to waive underwriting and accept *all* who apply. Under our Society's Program we need only *500* applications under each plan to achieve this vital concession. Therefore, we urge that you carefully consider the brochures that were mailed you and return your applications as early as possible to the administrator, David A. Dyer, Medical Arts Building, Roanoke.

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itching, burning, oozing, weeping of **POISON IVY** *and other summer dermatoses quickly subside when sprayed with*

METI-DERM® Aerosol

prednisolone topical

for relief of seasonal skin disorders nonsensitizing METI-DERM *Aerosol is*

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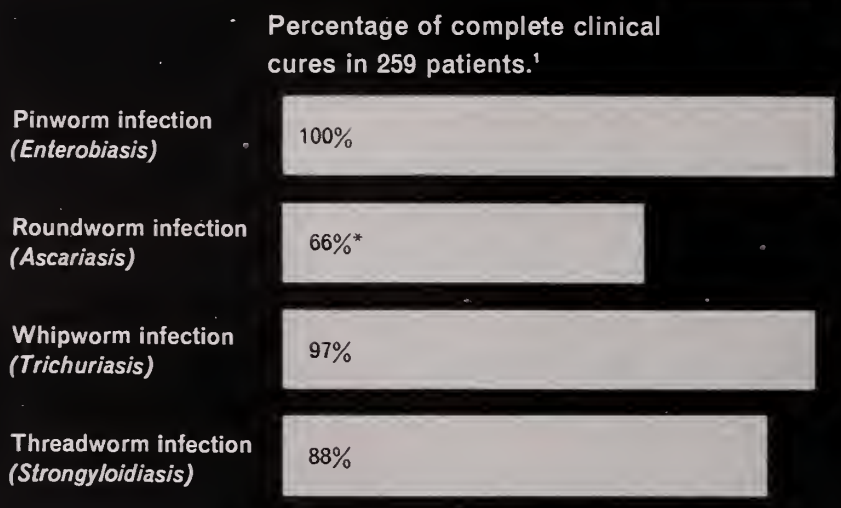


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eliminates four major worm infections

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- It is partially effective, and sometimes curative, in hookworm infection.
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1. Swartzwelder, J. C., et al.: J.A.M.A., 165:2063, 1957.

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The Virginia
MEDICAL
MONTHLY

May, 1959
Vol. 86, No. 5
Whole No. 1284

Guest Editorial....

Champagne in a Tin Cup

THERE IS A STYLIZED CONCEPT, closer to veridity than the novelist or playwright-creator would himself believe, of the great halls of American graduate medical education. This is the large hospital or the University center to which the newly graduated physician comes, to participate in the intense academic and scientific milieu within its walls. Here a young doctor discovers a quantity of the science of medicine and he develops a quality of application of that quantity of knowledge. Both are variables, and functions of many other variables—the individual and his emotional content, his training in college and medical school, and the inspirational guidance of his medical seniors. Here, as he ripens, he ascends the hierarchical ladder through internship to residency, and be becomes in time the disciple of some renowned white-coated Oslerian figure of the center. And in time, too, the disciple becomes white-coated and has his own disciples. This rich medical inbreeding perpetuates the fertile traditions of the medical center and the creativeness of its inhabitants. It is a continuum, both natural and proper, which promises a constant supply of skillfully trained physicians, many who become America's teachers, the major researchers, and the competent practitioners of medicine.

Eight hundred and sixty-seven hospitals offered 12,325 internships for the academic year 1957-1958 in the United States and its possessions.[1] To fill these available positions, there were 7,000 students graduated from American colleges of medicine. This disparity resulted in 17% unfilled positions, with some vacancies filled by foreign medical school graduates. Seventy-six per cent of the hospitals offering internships were those not designated by medical schools as participating in their programs of undergraduate medical education. Of this group, there were 598 hospitals of less than 500-bed capacity, offering 6,828 internships (about 50% of the national total), with 82% of the positions filled. These data, of the Council on Medical Education and Hospitals of the American Medical Association, indicate that 69% of American hospitals approved for internship are non-affiliated with medical schools, are less than 500-bed capacity, and offer nearly half of the internships to medical school graduates.

In the main, these non-affiliated hospitals are community institutions, providing

for the medical needs of a large proportion of the nation's people. These hospitals are "investigated and approved by the Council on Medical Education and Hospitals, (and) are considered in position to furnish acceptable intern training in accordance with standards adopted by the American Medical Association". This can only be true if the smaller community hospital has an ardent nucleus of its attending staff devoted to the continuing stimulation and supervision of its intern staff. There is, of course, only so much room at the apex of medical hierarchy, so little is the wonder that many of the white-coated disciples, and disciples of disciples, disperse to the cities, to the towns and to the provinces, there to become the local teachers, the minor researchers and the local competent practitioners of medicine. For these, this is not the stylized version of the ivory tower, the grand grand rounds, or the quiet cloistered laboratory. It is, however, the day-to-day care of the nation's ill or injured, in the nation's community hospitals. It is the staff conferences and ward rounds in community hospitals, invigorated by the eagerness of the inquisitive intern and energized by the dedicated attending physician who knows his responsibility and loves his work. It is the occasional new discovery of a truth about a human ailment, uncovered on the wards, or in the laboratory, or by x-ray study—occasional, but no less important therefor in the whole scheme of the advance of medical science. This is meaningful primary graduate medical education for the intern, no less so than in a celebrated medical Mecca. Here in the community hospital, no less than within the walls of the medical center, will the young doctor learn a quantity of medical science, and develop a quality of applying that knowledge; and here too in the community hospital, will all the same variables be operating. It is probably synonymous with the practice of medicine in the United States, and if this is true, it deserves profound respect.

A steady source of interns for community hospital internships should be assured by the National Intern Matching Program, the Intern Review Committee, and the Council on Medical Education and Hospitals. Medical school faculties should exert real influence to encourage graduates to accept appointments in smaller approved community hospitals. Relaxation of some requirements by State Boards of Medical Examiners should aid in attracting more foreign graduates to fill many voids.

Graduate education in the small non-affiliated hospital may not be vintage wine in costly stem-ware, but it can be a vibrant dynamic important experience made solidly significant to the intern by devoted well-trained staff physicians, and soundly basic to his future education or practice. Wherever this is found to be true, its continuance should be nourished by the leaders of American medicine.

A. C. Wyman, M.D.

1. Graduate Medical Education in the United States. J.A.M.A. 168: 5, 521-528, Oct. 4, 1958.

The Relationship of Dermatology to Other Fields of Medicine

G. A. GRANT PETERKIN, M.B.E. M.B., Ch.B., F.R.C.P.Ed.
Edinburgh, Scotland

SINCE EARLY CHILDHOOD the name Virginia has spelled for me high romance in the best sense of this misused word. It stood for all the manly virtues—a fine code of honour; courage in adversity; endurance; high intellectual abilities; and all the qualities of a true gentleman.

Less than a year ago, the name of Stuart McGuire, though I knew it, had little significance for me, but now thanks to Richmond friends such as Dr. Campbell Manson, I know something of this remarkable man, and realize that he possessed all the finest characteristics of a Virginian. The son of a famous doctor, who rode with and loved Stonewall Jackson, and who attended him on his death-bed, he must have found it far from easy to follow in his father's footsteps.

Yet Stuart McGuire touched nothing that he did not adorn. Physical handicaps that would have daunted a lesser man did not prevent him from leading a life full of action as well as thought. To you who knew him there is no need to recapitulate his brilliant career; to me, his name stands for all that was, and still is, Virginia; and I feel most unworthy to be chosen to commemorate the memory of such a man and I esteem it a great honour. "Let us now praise famous men, men of little showing; For their deeds continueth, Greater than their knowing".

In "War and Peace", Leo Tolstoy (1933) stated "No disease suffered by a live man can be known, for every living person has his own peculiarities and always has his own peculiar, personal, novel, complicated disease, unknown to medicine—not a disease of the lungs, liver, skin, heart, nerves, and so on mentioned in medical books, but a disease consisting of one of the innumerable combinations of the maladies of those organs". This holds good just as much in dermatology as in other branches of medicine; just as "no man is an island entire of himself", so is the skin merely one organ in the integration of the body, for it is essential that the dermatologist should be the antithesis of the venereologist described by Sir Robert Hutchison as "The sort of man who looked at life through a syphilitic haze and who would have prescribed blue pills for the Vestal Virgins". Even what are apparently the simplest of dermatoses may have a complex background; Impetigo flourishes on one person's skin and not another; Warts, due to a virus infection, may disappear at the touch of the charmer, whether lay or medical.

It is often forgotten that the skin is the largest organ of the body; it has many more functions to fulfill than other organs, such as the heart, and is exposed to the buffetings of nature and the abuses of civilization in ways unknown to the rest of the human frame. One of the fascinations of dermatology is the frequent connection of skin diseases with the other branches of medicine and surgery; how often one has to turn for help to colleagues in other spheres and how often these colleagues require a similar service. I have noted with amusement how the young doctor or nurse shudders at the idea of "doing skins" and how frequently this same person after a short time becomes enthralled by the subject. I suppose all, who like myself live in Edinburgh, ought to be disciples of Dr. Joseph Bell, the prototype of Sherlock Holmes, and there is no doubt that not only the dermatologist, but every medical man, ought to cultivate his powers of observation, and should encourage students to do likewise. Even outside hospital the dermatologist tends to notice skin changes in the folk around him—the falsely rubicund cheeks of one who has Ichthyosis or Rosacea; the pale, drawn facies of the person with Alopecia Areata or asthma-eczema; the fissuring of the flexures which may indicate a vitamin deficiency or a tendency to seborrhoeic dermatitis; and the anxious, furrowed brow and

PETERKIN, G. A. GRANT, *Physician-in-charge, Skin Department, Royal Infirmary, Edinburgh, Scotland.*

The Thirtieth Annual Stuart McGuire Lecture, delivered on 12th November, 1958, at the Baruch Egyptian Building, Medical College of Virginia, Richmond, Virginia.

Agag trend of the sufferer from pruritis ani.

The colour of the skin may give us clues—the yellow hue of jaundice, carotinaemia or quinacrine; or the brown due to such causes of haemochromatosis, Gaucher's disease or to intoxication to drugs such as arsenic or silver. The presence of angiomata may indicate the possibility of Hereditary Telangiectasis, or, if they are pulsatile, the likelihood of cirrhosis of the liver, just as "liver palms" may be suggestive of other types of hepatic disorders. Tattoo-marks may be the obvious sign of a trade such as coal-mining or the effect of a Schu-mine in warfare; or, if they are voluntary, may indicate the countries served in and may thus be a clue to a disease prevalent there. The old adage still holds good—"if you see a patient with tattoo-marks and waxed moustaches, always take a Wassermann". Some occupations may leave significant traces, usually less obvious than the "cauliflower ear" of the boxer, such as the string marks of a guitar player, the "shagreen-skin" of the old shale oil worker, or the "knuckle-pads" of the leather-worker. Francesco Ronchese of New York is a notable authority on such stigmata, and his erudite papers make fascinating reading.

The dermatologist can, on occasions, be of assistance to the dentist, in being able to differentiate lichen planus from leukoplakia or contact dermatitis due to dentures, or recurrent herpes from aphthous ulcers, pemphigus or a yeast infection. Pigmentation of the buccal mucous membrane may be due to a true melanoma, to pigmentation from drugs such as arsenic, bismuth, or quinine, to pellagra or to general diseases such as Addison's or acanthosis nigricans, or Peutz-Jegher syndrome, associated with intestinal polyposis, and perhaps carcinoma.

To obtain some idea of how frequently the rest of medicine impinges on dermatology, I selected at random a consecutive series of over 2,000 case records, and found that in 24% of these there was some direct reference to some other branch of medicine.

This table shows the details:—

Incidence of Dermatosis Related to Other Fields of Medicine

	Male	*Female*	*Total*	*Percentage*
Number of patients	1062	1039	2101	100%
Number of patients with diseases related to other branches	147	358	505	24%

Distribution of Dermatoses Related to Other Fields of Medicine

	Male	*Female*	*Total*
Medicine	69	146	215
Surgery	29	56	85
Plastic surgery	2	7	9
Gynaecology & Obstetrics	—	67	67
Ophthalmology	3	11	14
Ear, Nose and Throat	14	8	22
Pediatrics	9	21	30
Psychiatry	10	17	27
Tuberculosis	7	15	22
Venereal Disease	2	7	9
Fevers	1	1	2
Tropical Diseases	1	1	2
	147	358	505

One might think that the lordly surgeons would have little truck with "skin men", but not infrequently one has to enlist the help of the other. The surgeon may have occasion to refer to the dermatologist patients with diseases such as Orf (Contagious Pustular Dermatitis of Sheep), Contact Dermatitis following burns or other injuries, perionychia due to yeast infections, warts, and varicose ulcers or eczema, which the dermatologist is equally ready to pass on to him for obvious reasons. The skin specialist sends to the surgeon many minor conditions —cysts, such as sebaceous, inclusion synovial or mucous; foreign-body reactions which clinically and histologically may resemble sarcoidosis; Subungual Exostosis, angiomata or naevi, as for example granuloma pyogenicum, glomus tumour, cavernous angiomata, cellular naevi and fibromata, while he entrusts to the surgeon the unpleasant task of removing nails infected with ringworm. Malignant Melanomata, Sclerosing Angiomata, cutaneous Carcinomata, or even von Recklinghausen's disease, are among other surgical indications.

The plastic surgeon is often called in to treat malignant disease, angiomata, naevi, and rarer diseases such as acne conglobata, or to help the victim of a long-standing lupus vulgaris. For unusual diseases such as Adenoma Sebaceum associated with Tuberous Sclerosus, or Cavernous Haemangiomata of the Sturge-Weber type with "naevoid amentia" the patient may be referred to the neurological surgeon, or for conditions such as Raynaud's syndrome, or Bazin's disease an expert on vascular surgery may be needed. A brisk but minor trade goes on between the orthopaedic surgeon and the dermatologist with such things as corns and warts.

EAR, NOSE AND THROAT

Often the dermatologist tends to be a thorn in the side of the busy oto-rhino-laryngologist, who is

frequently asked to decide whether or not a hidden focus of sepsis is present in the sinuses or the tonsils, but he also can be helped in many of the cases of what he call otitis externa and what the skin specialist calls seborrhoeic dermatitis or flexural infective eczema. People with this type of skin may also tend to develop that recurrent streptococcal lymphangitis called "Erysipelatoid", affecting the ears or nose like a mild erysipelas, which is more in the dermatologist's province. Lesions of the buccal mucous membrane may also necessitate the opinion of a dermatologist.

OPHTHALMOLOGY

All eye specialists recognize that there are many close links in their specialty with dermatology, partly because the eyelids are in the province of both. Of the many diseases which may affect the lids are new growths, both malignant and benign. Basal and squamous cell carcinomata are often found on the eyelids and occasionally one sees malignant melanomata. Of the simple tumours, perhaps the commonest are the angiomata, either "spider naevi", cavernous lesions, "port-wine stains", and warts, the last of which may affect the lids, either as filiform growths or as plane warts. Cutaneous tags and seborrhoeic warts are also not uncommon. Pseudoxanthoma Elasticum is associated with angioid streaks of the retina.

Xanthelasma, which will be mentioned later, characteristically occurs on the eyelids and the yellow plaques are easily recognized. The eyelids are a favourite site for molluscum contagiosum and milium cysts. Many different diseases can produce an oedematous swelling of the eyelids, e.g., contact dermatitis, giant urticaria, streptococcal infection, dermatomyositis, and it is usually the dermatologist's job to unravel the diagnosis.

Lupus vulgaris may at times involve the eyelids, sometimes in conjunction with a strumous keratitis, and lupus disseminatus miliaris characteristically affects the lower eyelids. Lupus erythematosus may not only affect the skin of the lid, but also the conjunctivae, producing a typical scarring, while the first sign of sarcoidosis may be "Heerfordt's syndrome", with irido-cyclitis, parotitis, etc.

Adenoma sebaceum or tuberous sclerosus, already referred to, may show mulberry-like lesions on ophthalmoscopical examination. Reiter's disease is often first recognized by the dermatologist, who is aided in differentiation by the presence of urethritis, arthritis and conjunctivitis, while in the triple symptom complex of Behçet there may not only be ulceration of the mouth and genitalia but also conjunctivitis, irido-cyclitis, etc. Stevens-Johnson's disease or Dermato-stomatitis is usually accompanied by a severe conjunctivitis and sometimes bullae occur on the cornea and produce blindness.

Blepharitis is frequently present in those with a tendency to Seborrhoeic Dermatitis and ophthalmologists recognize that treatment of the skin disease is often essential to heal the eye condition, just as a Keratitis or corneal ulcer wll often get better following treatment of a Rosacea. Juvenile Cataract and Keratoconus may be associated with atopic eczema, while Ocular Pemphigus has a particular interest for the dermatologist though it is not a fatal disease like Pemphigus Vulgaris.

GYNAECOLOGY AND OBSTETRICS

Most dermatologists are fascinated by the high percentage of female patients in whom endocrine factors appear to play an important part. One need only instance Acne Vulgaris and Rosacea in which there is so often an exacerbation in the pre-menstrual phase; or the naevoid structures affecting the neck and called Cutaneous Tags which sometimes appear at puberty but more often about the time of the menopause. Circumscribed Neurodermatitis and Disseminated Neurodermatitis are apt to begin then also. Fox-Fordyce Disease, a chronic intensely itchy disorder of the apocrine glands, may be a form of neurodermatitis and seems to be associated with ovarian dysfunction, while Keratodermia Climactericum is a thickening and fissuring of the skin of the palms and soles which appears after the menopause and responds to high dosage with oestrin preparations. One would expect alopecia of the male type to respond also to oestrin but this not so.

Pruritus ani et vulvae is probably more often due to a dermatological cause than a gynaecological one but it would take the whole evening to discuss this trying complaint, with its many different causes such as Lichen Sclerosus et Atrophicus and monilial vulvo-vaginitis.

In pregnancy may occur a skin disease—Herpes Gestationi—the cause of which is undoubtedly endocrine but so far unknown. Many other dermatoses may be aggravated or ameliorated by pregnancy, but this condition appears to be directly due to it.

INTERNAL MEDICINE

Naturally it is with internal medicine that the closest links are found, and in not a few general

diseases it is the dermatologist who has first drawn attention to them and who has explained the aetiology.

However, the essential cause of the asthma-eczema syndrome is still unknown to medicine and no doubt the discovery of the basic cause of one will lead to elucidation of the whole condition, which may eventually be attributed to some deficiency or alteration in the molecular structure of desoxyribonucleic acid.

Deficiency diseases often have dermatological aspects. In the old days the girl with Chlorosis was a common sight, and now and again the skin specialist is able to "spot" a hypochronic or a pernicious anaemia. The effects of deficiency of Vitamin B complex are too well known to require comment, but it is worth mentioning that one still occasionally sees mild cases of pellagra and even lack of Vitamin C in the form of scurvy. At one time, a type of dryness of the skin with follicular hyperkeratosis was thought to be due to shortage of Vitamin A, but Ramalingaswami and Sinclair (1953) have demonstrated that the symptoms are more probably due to lack of certain higher fatty acids in the diet. The symptoms of malabsorption syndrome as in sprue can be caused by certain drugs such as the heavy metals and mepacrine, and dermatologists are well aware that eruptions due to drugs can mimic any disease whatsoever.

Purpura, for instance, is frequently caused by drugs, and there are many entirely dermatological causes for this type of rash. In fact, a full haematological examination frequently fails to reveal a cause for a purpuric rash.

Urticaria falls within the province of the physician just as much as in that of the skin specialist, and can be the first presenting symptom of many diseases, such as reticulosis, dermatomyositis, malaria, or infective hepatitis. Likewise, the development of a Herpes Zoster in an adult should make one consider the possibility of malaria, hidden malignant disease, or some condition treated with deep x-ray therapy. In Urticaria Pigmentosa, the lesions are packed with mast cells which contain heparin monosulphate. These mast cells in the skin may signify a mastocytosis involving internal organs and producing bone changes.

Endocrine factors play such an important part in so many dermatoses that it is not possible to mention more than a few diseases such as Circumscribed Myxoedema situated usually over the shins and following thyroidectomy.

George J. Nathan once described the plays of J. M. Barrie as the "triumph of sugar over diabetes", and when glycosuria occurs in the human the skin is prone to develop infections, not only septic ones, but also with the yeast Candida Albicans, which usually involves flexural areas, as in the form of vulvo-vaginitis or perionychia, but occasionally as a generalized moniliasis. As well as yeast infections, Necrobiosis Lipoidica Diabeticorum may be the first clinical evidence of the disease, and usually occurs as reddish-brown plaques on the shins, the dorsa of the hands or on the forearms. Xanthomatosis may be due to hyperlipaemia and therefore found in diabetes, chronic pancreatitis or lipoid nephrosis, or may be of the hyper-cholesteraemic kind such as Xanthelasma palpebrarum, with which there is so often a family history of cardiovascular disease. The first symptoms of Amyloidosis may be itchy nodular patches or involvement of the tongue, while Porphyria may first present itself as a cutaneous disease.

Ulcers of the legs are often wrongly termed varicose when they are really trophic, due to vascular disease, or caused by rarer conditions such as ulcerative colitis, Felty's syndrome, sickle cell anaemia or even diphtheria. Nodular eruptions of the legs often belong to the province of the physician, as in the differential diagnosis one must include Polyarteritis Nodosa, Thromboangiitis Obliterans, Erythema Nodosum, and Bazin's disease, due to tuberculous infection.

Tuberculosis, like syphilis and drug rashes, must always be kept in mind by the dermatologist in differential diagnosis, for these can simulate closely many other types of dermatosis. It was a dermatologist who first demonstrated that Sarcoidosis was a systemic disease, though Jonathan Hutchison first described the skin lesions as "Mortimer's Malady" in 1898. As well as the changes in the liver, lymph nodes, etc., the radiological findings in the lungs and the long bones are absolutely characteristic. Long before internists were aware of it, the dermatologist Kaposi, as long ago as 1896, showed that Disseminated Lupus Erythematosus was a constitutional disorder. Within the past ten years, fresh attention has been focused on this disorder, with the discovery of the L.E. cell by Hargraves and his colleagues (1948); the control of its symptoms by cortico-steroids; and the efficacy of modern antimalarial drugs such as chloroquin, camoquin and plaquenil. Lupus Erythematosus and Dermatomyositis may simulate each other closely, so that close

observation and thorough investigation of such cases may be required.

To survey the associations of dermatology with pediatrics, venereal disease, specific fevers or tropical conditions, would encroach too much on the time at our disposal, while the links between psychiatry and dermatology are so strong that one sometimes feels that there are two schools of dermatology—those who believe that almost all skin troubles are entirely due to psychosomatic problems and those who insist that a skin disease must be due to organic disease. Of course, both schools of thought are wrong. For over fifty years it has been recognized that Scleroderma may be associated with visceral lesions, but it is only since 1945 that much attention has been drawn to such features as the sclerodermatous changes in the oesophagus, heart and lungs.

Though Poikilodermia Atrophicans Vasculare may be found in association with dermatomyositis or scleroderma, the appearance of this curious reticulation should make one suspect the possibility of a serious general disorder such as Hodgkin's disease or Leukaemia. Similarly, the diagnosis of Acanthosis Nigricans, with its dusky warty hyperkeratosis makes it imperative to institute a hunt for internal malignancy, particularly carcinoma of the stomach.

Only too often, a dermatosis is the first sign of an internal malignant disease which may show itself in many curious ways. Sometimes it may be in the form of metastases of a neoplasm with secondary tumours on the skin, or even more insidiously, as a rash indistinguishable from a chronic eczema, like the so-called "premycotic" eruption. Such a rash may be present for months or years before there is any other evidence of a reticulosis even in the bone marrow.

Lastly, there is a group of skin diseases which may be associated with arthritis, not only the well-known Psoriasis—Arthropathica but also Reiter's disease and Acrodermatitis Perstans. Such diseases are really problems which should be solved by the combined efforts of physicians and dermatologists, like many of the diseases to which I have referred so briefly, for I have vainly attempted to cover a vast subject in a brief period.

References

Hargraves, M. M., Richmond, H. and Morton, R.: Proc. Mayo Clinic. 23:25, 1948.

Ramalingaswami, V. and Sinclair, H. M.: Brit. J. Derm. 65:1, 1953.

Tolstoy, L., tran. by L. & A. Maude: "War and Peace" Oxf. Univ. Press p. 324, 1933.

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New Rauwolfia Preparation

A new derivative of rauwolfia, the old Indian snake root remedy, has been found to lower high blood pressure without producing the many adverse side effects caused by other rauwolfia preparations. The new drug, called syrosingopine (Singoserp), was discussed in the April 4th Journal of the American Medical Association by four Galveston, Texas, physicians.

They gave the drug to 77 patients with essential hypertension (high blood pressure of unknown cause) at the University of Texas Medical Branch.

The chief advantage of syrosingopine over other rauwolfia derivatives, such as reserpine, is the relative infrequency with which it produces disturbing side effects. These include drowsiness, terrifying nightmares, depression, nasal congestion, and gastrointestinal disturbances. Fourteen of the patients were markedly intolerant to other rauwolfia preparations, but only four of these showed any signs of intolerance to syrosingopine and these were relatively minor.

The doctors—George R. Herrmann, Elmer B. Vogelpohl, Milton R. Hejtmancik and James C. Wright—recommended the use of syrosingopine for those patients with essential hypertension who are unable to take the other rauwolfia preparations.

The Radiologic Status of the Esophagogastric Segment

A Critical Review and Some Personal Observations

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I. Introduction
II. Definitions: Esophagogastric junction, Cardia, Cardial Button, Distal Esophagogastric Closing Mechanism (DECM)
III. Phrenic Ampulla
IV. Vestibule, and its several types of radiologic behavior
V. Cardial region, Cardial Button, Cardial Valve
VI. Phrenoesophageal Membrane
VII. Diaphragm
VIII. Recapitulation of the constituents of the DECM
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XI. Hiatal Hernia, sliding, paraesophageal, and mixed
XII. Rational radiologic classification of hiatal hernias

I. INTRODUCTION

No other part of the gastrointestinal tract has occasioned more disagreement about its anatomy, physiology, and radio-pathology, than the esophagogastric segment. From 1930 to 1946, some thousand papers appeared on this subject.[65] The flood tide was yet to come; knowledge had to keep pace with the progress of thoracic surgery.

Confusion about the esophagogastric segment stems from several factors. It, like "transpyloric prolapse" of the antral mucosa, is susceptible to accurate study only in the intact patient. Anesthesia, laparotomy, passage of tubes, study of surgical or dead-house material, all are obviously incompatible with the natural state. Only the radiologic method approaches the physiologic. The authority of the esophagoscope, with its "dogma of infallability", has dampened the interest of many radiologists in this segment[37], which often merits merely a passing glance in the upright patient. Such authority should be tempered by realization of the esophagoscope's limitations: blind spots, stimulation of an unnatural bolus, displacement of mucosa as the instrument is introduced and withdrawn, requirements of anesthesia, etc., even though it is at once admitted that it alone can solve many of the problems in this segment. As with the stomach, the radiologic and endoscopic methods should be regarded not as competitive, but as complementary.

The purpose of this paper is to present an eclectic conception of this segment, a working scheme consistent with most of the data. Though mindful of the contributions of Äkerlund, Allison, Harrington, Barrett, Johnstone, Lerche, and many others, I have attempted as much as possible to avoid the pitfall of *"Ipse dixit"*.

II. DEFINITIONS

Esophagogastric *segment* is preferable to *junction* because the latter indicates that zig-zig line (ora serrata) marking the abrupt transition from squamous epithelium (esophagus) to columnar (gastric). A longitudinal section through the line microscopically will show no other difference (4). *Segment*, as here understood, is more general, including surrounding organs such as diaphragm, phrenoesophageal ligament, etc. Even such a common term as *cardia* is not specific.[16,23,28,45] The most logical meaning is that narrow segment of stomach characterized by cardiac glands, which is *not* a radiologic determination. The *cardial button* is a radiologic concept, and will be described later. *Distal Esophagogastric Closing Mechanism* (DECM) is preferable to those names emphasizing, or confined to, one part or physiologic activity, such as esophageal constrictor, sphincter, valve, hiatal valve mechanism, etc. The wisdom of the expression DECM will be developed later. *Cardial region* is non-specific, in-

cluding the cardial button, cardial incisura (or angle), and cardial orifice.

III. PHRENIC AMPULLA

The appearance and behavior of the phrenic ampulla need not be described since they are well known to all radioscopists. Its make-up, however, has occasioned disagreement. It has been claimed that its distal border is formed by the inferior esophageal sphincter[19,20,52], and even the constrictor cardiae.[62,63] Neither of these elements can be accepted as the major component of the base of the ampulla in view of its intimate fluoroscopically determined relation with diaphragmatic (crural) contraction. The base of the ampulla is usually asymmetric. I have found its left border is deeper than, as deep as, less deep than, its opposite side in the frequency relation of 10 to 1 to 1. This is in keeping with the more powerful and considerably thicker left muscular margin of the hiatus, and the postero-medio-caudal pull of the hiatal sling.

It is possible that those who have minimized the role of the diaphragm in forming the base of the ampulla have mistaken the anatomy of the diaphragm. In my material, the base of the ampulla *appeared* to be at, above, or below, the diaphragm in the frequency relation of 2 to 1 to 1. This will be discussed later.

The characteristic fluoroscopic behavior of the phrenic ampulla should differentiate it from hiatal hernia and esophageal reflux. Furthermore, study of radiographs of the ampulla may disclose a soft-tissue companion shadow (Fig. 1) along its right border border merging into the diaphragmatic shadow.[18] This was noted in about 15% of my material. This shadow is taken to represent the right esophageal wall, its covering mediastinal pleura, the visceral pleura, and any intervening fluid. The presence of this normal shadow, in my opinion, excludes herniation. Its changed appearance in presence of hernia will be discussed later.

IV. VESTIBULE

The distal two or three centimeters of the esophagus, comprising an anatomic, physiologic, radiologic and pharmacologic entity[9,12,30,41,49], has been assigned many names, especially cardiac antrum and esophagogastric vestibule. The latter is to be preferred because it is more an anteroom (*vestibulum*) than a cave (*antrum*). While a characteristic musculature both at its proximal end (inferior esophageal sphincter), within the vestibule itself, and its



Fig. 1. Companion shadow on right side of lower esophagus. Normal. Excludes hernia.

distal end (constrictor cardiae) has been described[41], there is by no means general agreement[1,35,44] except possibly for diffuse thickening of the muscular layer in some specimens. It is pointless to enter this discussion.

However, the vestibule may exhibit several types of *radiologic* behavior:

1. Immediately as the barium swallow is completed, the entire vestibule is contracted, and the esophagus just above the vestibule shows minimal distention (Fig. 2). The proximal vestibular junc-



Fig. 2. Tonic state of entire vestibule. Normal.

tion resembles a funnel opening proximally. The distal end of the contracted vestibule terminates either abruptly into the stomach, or occasionally it too may resemble a funnel, but opening distally into the stomach (Fig. 3). That this sphincteric contrac-



Fig. 3. Funnel-like opening of distal ends of vestibule. Probably normal, although early "decompensation" of cardial closing elements cannot be excluded.

tion of most or the entire vestibule is not related to the diaphragm is demonstrated by its relative independence of respiratory excursion. Transducer pressure studies show that the pressure differential between esophagus and stomach occurs over a much shorter segment than here portrayed. Therefore, the tonic force of this much larger segment must be minimal.[17]

2. The vestibule may be dilated, the esophagus above being tonic, and the vestibule separated from the stomach by a mechanism to be described later. This picture (Fig. 4) is less common than the first, and is more fleeting, the vestibule presently emptying its contents into the stomach. This is often called hiatal hernia or hiatal insufficiency, but is neither. The vestibule and the esophagus above appear to have an inverse relationship: when one is distended, the other is contracted.

3. The best example of persistent vestibular contraction is, of course, achalasia (cardiospasm). Both these terms are unsuitable because they focus attention on the local aspects of the disease. Pressure studies indicate that most of the esophagus is abnormal[9,30]: there is a failure of initiation and propagation of a normal peristaltic wave, which is the "key that opens the vestibule". In a way not clear, thickening of the vestibular muscle must be a response to this autonomic disorder. A catheter can be passed through the narrowed segment with little difficulty. The level of fluid within the distended esophagus is a measure of the pressure needed to



Fig. 4. Vestibule distended with air and barium. Esophagus above is contracted. Normal.

open the segment. Relief with preservation of the DECM can at times be obtained by the Heller operation in which the vestibular muscle is cut longitudinally but the cardial region is preserved intact.[4]

4. Ampullary grooves: One often sees a shallow symmetric groove in the phrenic ampulla near its apex (Fig. 5). It is of uncertain origin. Why it is not seen in every patient cannot be answered. Possibly it represents the beginning phase of the lower esophageal contraction ring.

5. Lower esophageal contraction ring: This is a smooth, narrow symmetric encroachment upon the lumen of the lower esophagus (Fig. 6), best elicited during full inspiration. It is not an uncommon finding in the routine examination with the patient horizontal, but may also be visualized with the patient standing.[19] It is usually without symptoms, but an occasional patient will have dysphagia, even to such a degree that surgery will be needed for relief. The presence or absence of symptoms has been correlated with the diameter of the ring.[57] Some interpret the ring as a passive structure[57], fixed in diameter over the years, and others look upon it as an active structure moving along the esophagus and contracting actively upon the passing bolus.[29] Others interpret it



Fig. 5. A. Typical ampullary groove. B. Few seconds after "A". It is tempting to equate the constriction indicated by arrow with the ampullary groove in "A", and the vestibular sphincter, the barium below being in the vestibule.

as a normal "fold of mucosa pinched by two opposing propulsions."[37] Still others feel that the ring may be a reaction to superficial ulceration.[21]



Fig. 6. Constriction ring. No symptoms.

Endoscopic findings are either normal or inconstant. One ring at surgical operation was associated with a hiatal hernia[57], and another ring was found to be hypertrophied muscle.[29]

The only reported autopsy of a patient with a symptomatic ring disclosed that it was formed by a simple mucosal fold covered above by squamous mucosa and below by gastric mucosa, with a fine ring of muscularis mucosae just deep to its inner free border (New England J. Med. 259:1-8, 1958).

Two facts of interest emerge from study of these reports: first, the ring is commoner in the older age groups, and second, there is a higher incidence of esophageal diverticula associated with the ring than explicable on the basis of chance. The first observation is in keeping with senescent degenerative change within the nervous system, and the second suggests that these rings are not completely innocuous (other than dysphagia usually controlled by simple means) and that there must be at times an elevated intraesophageal tension. Note also that hypertrophy of the inferior esophageal sphincter was found in a series of pulsion esophageal diverticula[38], and it was suggested that the diverticula represented herniations of the mucosa through weak spots in the muscle layer incident to elevated intraesophageal pressure occasioned by the thickened sphincter. Autonomic imbalance was considered the basis.

Because all gradations exist between the typical ampullary groove and the typical contraction ring (Fig. 1), it is a logical tentative assumption to identify both as different manifestations of the same structure. The strictness of the criteria used in identifying these rings will determine the relative incidence of rings and ampullary grooves in a given material. If this assumption is correct, then the contraction ring is merely a prominent, thickened ampullary groove. If it is true, as has been suggested, that there is often a hiatal hernia below, the ring may be due simply to work hypertrophy, this structure having to do more than its usual share in preventing gastroesophageal reflux.

6. A constriction may be noted in the lower esophagus in those hiatal hernias with the cardial region above the diaphragm. This ring is usually coarser and less symmetric than the contraction ring discussed above (Fig. 7), and may be regarded as the vestibular sphincter, but further hypertrophied through additional demands put upon it to prevent reflux.

7. An apprehensive patient may show a tendency to obstruction at the lower end of the esophagus, due to tonic contraction of the entire vestibule. It opens readily spontaneously or following swallowing. There is no dysphagia. This is commonly, and incorrectly, reported as cardiospasm. A similar behavior may be noted in old people, in whom the esophagus may be somewhat dilated, but with no dysphagia. Both these states may be related to autonomic imbalance with sympathetic preponderance, in the former group due to the emotional state and in the latter, to the involution of senescence.

How to piece all these varieties of muscle activity into a unified whole? They can be divided into three groups:

A. Normal: This includes numbers 1, 2, 4, and 7. Number 1 must represent total vestibular contraction. Number 2 must represent the relaxation of most of the vestibule and contraction of the esophagus above.

B. Borderline: Number 5.

C. Abnormal: Numbers 3 and 6.

What is the nature of the mucosa within the vestibule? The answer comes from esophagoscopy. A variable segment of the vestibule is covered with gastric mucosa.[48] It may extend much higher on one side that on the other, and there is considerable freedom of glide upon the submucosa. The actual level of the mucosal junction between esophagus and stomach is a function of the habitus, of the person's state of gastric distention and probably other factors as well. Clips attached to the junction prove the unreliability of distinguishing it by radiologic pattern.



Fig. 7. Sliding hernia, but cardial incisura above diaphragm. No reflux. Constriction by opposing arrows taken to be the hypertrophied vestibular sphincter. Note how the normally narrow companion shadow of esophagus above merges into the much thicker companion shadow of the herniated stomach. This thickening must be caused by the thicker stomach wall (as compared with the esophagus), and the retracted peritoneal reflexions of the hernia.

What is that portion of the lower vestibule lined with gastric mucosa to be called? It is not esophagus in spite of its tubular character because by definition esophagus must have squamous epithelium. The difficulties will be resolved by calling the tubular structure gullet and only that part covered by squamous epithelium, esophagus.[4]

The concept of "abdominal esophagus" has led to much dispute, even to denial of such a structure.[32] The attachment of the esophagus to the hiatus by the phrenoesophageal membrane allows relative motion between the two with each respiratory excursion, and longitudinal motion initiated within the

alimentary canal such as upward retraction of the esophagus by virtue of its cricoid attachment. It is a certainty, therefore, that the relation between the vestibule and the hiatal tunnel is variable, and under certain conditions some of the vestibule may reach below the tunnel. It is believed that the concept of the abdominal esophagus is confusing and useless, and should be discarded. The vestibule is the last station in the gullet.

V. CARDIAL REGION

A muscle fiber tract, the constrictor cardiae, has been described[41], but this has not been universally accepted. Transducer pressure studies indicate that the mechanism of the cardial region behaves much more like a valve than a sphincter[17], in that the antegrade pressure required for opening from the esophageal side is much less than from the gastric side. Relatively high intragastric pressures can be withstood. Further, these studies indicate that the occluding mechanism must be just a few millimeters in length. The stomach and lower esophagus mobilized at the operating table provide further but indirect evidence of a cardial valve rather than a simple sphincter: air introduced into the stomach will not enter the esophagus even with considerable manipulation of the media, and even with production of a ninety degree angle between the esophagus and the stomach, but air readily escapes into the esophagus with manipulation of the cardial region.[17] Studies on cadavers show that the greater the angle of His (the angle between the esophagus and fundus), the less the pressure required to gain entry into the esophagus.[44] Such cadaver studies, while indicating the possibility of existence of such a factor, are to be regarded with circumspection because they assume the occluding process to be inert and non-vital, and fail to consider the autoplastic properties of gastrointestinal mucosa (Forssell). It will be noted that marked widening of the angle of His as found with pneumoperitoneum does not result in loss of the cardial-closing mechanism.[33] It is likely, therefore, that mere intragastric tension producing a narrow angle of His is not the important factor in this mechanism, as has been claimed.[15]

A study of the filling defect caused by the esophagus entering the cardial region (cardial button) and it differentiation from tumor disclosed a pattern resembling a crescent (or circle) and star, thought to represent a "motor phenomenon" in the terminal esophagus seen axially.[27] A more satisfying explanation was given some years later by Jutras et al[37], whose beautifully illustrated paper has received scant attention. They called this sign the "burnous", which is a one-piece cloak-like garment and hood, worn by Arabs and Moors. The crescent referred to above is the hood and the esophagogastric folds streaming beneath and proceeding distally, the body of the cloak (Fig. 8). Two dominant folds can often

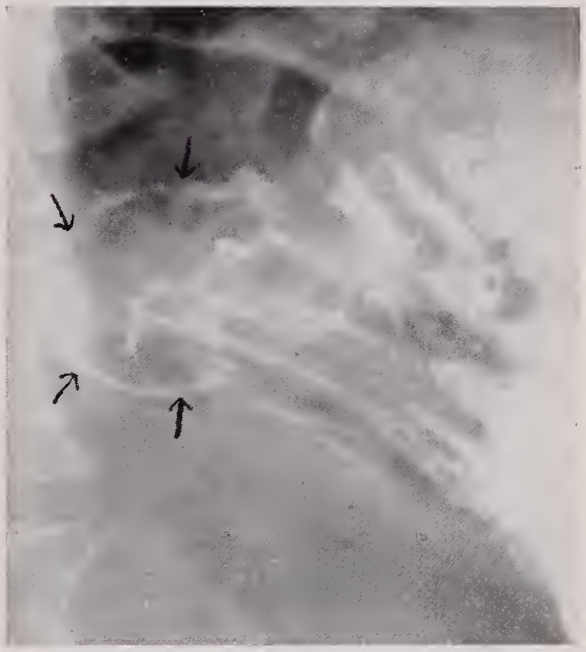


Fig. 8. Striking burnous, or crescent, sign, with the gastric folds emerging from the center of the hood and streaming downward. This patient had repair for a sliding hernia some years ago, which may possibly be a factor in the prominence of the sign.

be seen in the lower esophagus st.eaming beneath the hood and continuous with the two major folds along the lesser curvature, the groove between being the true lesser curvature. The impossibility of differentiating esophageal from gastric mucosa by radiologic means is evident from Fig. 9. The fundamental difference between esophagus and stomach lies in the epithelium of the mucosa and not in the gross morphology of its folds. Jutras's reproductions which must be studied, were obtained by simple barium swallows using very heavy paste, the aerophagia needed for swallowing given splendid contrast. While there were many variations in the burnous pattern, the underlying theme was present in all. The hood, or crescent, was the main point of interest, and the authors believe that this represents a mucosal fold, which, with its autoplastic properties, represents the actual hiatal valve. Such a valve was described by Gubaroff in the last century.[42] A well developed hiatal valve is said to be present in some lower forms.



Fig. 9. Note continuity of the esophageal and gastric folds through the cardial button.

Some gross specimens in Jutras's paper record a prominence convincingly. However, I have studied several fixed specimens and at least in some a palpable ridge was made by the thick left margin of the hiatus. In an occasional one there was no question of a prominent fold of mucosa overhanging the orifice (Fig. 10). Nevertheless, even in the face of negative or ambiguous deadhouse anatomy, the findings of living anatomy and function, *given undisturbed only by the radiological method,* cannot be neglected. While only 47 of 1800 gastrointestinal examinations[27] showed a well developed crescent sign, practically every stomach in the right anterior oblique position that provides suitable air contrast will show some variation of it, although perspicacity may be needed to detect the underlying theme in some. Commonly, only a straight barium line perpendicular to the long axis of the esophagus, representing barium in the sulcus on the cephalic side of the mucosal fold, is seen. At times, the cardial button may be visualized by simple air-contrast without the aid of barium (Fig. 11).



Fig. 10. Note prominent crescentic fold hanging down into the cardial orifice. Lower esophagus and upper stomach ligated, segment distended and fixed before opening.



Fig. 11. Remarkable demonstration of cardial button without the aid of barium contrast. Note the crescent outlined by air in its cephalic groove, the trace of barium (opposing arrows) in the vestibule, proceeding through the cap and emerging beneath it.

In summary, there is convincing physiological, and good anatomic and radiologic evidence of a cardial valvular mechanism.[3,17,37] The muscle tract said to form a cardial sphincter (but no real radiologic evidence for this) may be regarded as the agent for approximating the circumference of the cardial region so that the mucosal valve may operate. The cardial constrictor tract, if this is true, may be likened to the aortic ring. Any factors producing

dilatation of the ring such as syphilis and hypertension result in insufficiency of the aortic valves in spite of their intactness. The gastric submucosal muscular sling[4] sitting like an inverted "U" astride the angle of His tends to maintain this cardial approximation as well. The hiatal sling possibly also assists. Esophagogastric secretion may help make the valve air- and water-tight. A narrow angle of His may be regarded merely a sign that the cardial region is favorably disposed for competent operation of the mucosal valve, but has no direct part in it. This concept is consistent with those cases of cardial insufficiency ascribed to high-entry of the esophagus into the stomach which are helped by suturing the fundus to the left border of the lower esophagus; conditions are improved for competent operation of the mucosal valve.

VI. PHRENOESOPHAGEAL MEMBRANE

To one observer, this membrane must be dissected "with the eye of faith"[3]; to another, it is of sufficient importance to make the subject of a paper on hernia repair.[31] About its existence there can be no doubt. It is a derivative of that fascial continuum, deep to the peritoneum, which takes its local name from that part with which it is in relation, such as transversalis fascia, diaphragmatic fascia, etc. The fascia, rich in collagen and elastic fibers, extends from the hiatal margins upward to insert in the esophagus like a tent, and sends a prolongation downward into the cardial region. The upward prolongation receives a contribution from the endopleural fascia but this is not important. Some muscle fibers have been described in the upward limb (muscle of Juvara), and in the downward limb (muscle of Rouget).[37] Such a muscle sling is well developed in certain rodents and its function has been likened to that of the levator ani. In man, it may be of use during regurgitation. The membrane is important in fixing the relative motion between esophagus and diaphragm and is an antagonist to the longitudinal muscle of the esophagus. With age its elastic and collagenous elements atrophy, predisposing to sliding hiatal hernia. The gastrophrenic ligament, a peritoneal fold, has been referred to as a fixing element[54], but is a ligament in name only[10] and probably of minimal importance. The left gastric artery has been considered important in this regard.[4]

VII. DIAPHRAGM

This is the last of the anatomic elements to be considered in the esophagogastric segment, but just as controversial as any. Failure to understand certain basic anatomic features of the diaphragm may lead to faulty concepts.[18] Microscopically, the composition of the structure is not homogeneous[55], the anterior fibers being much weaker than the posterior by virtue of their frequent fibrous clefts. Respiratory excursion is not uniform[24], being, for example, 2 to 3 cm. at the hiatus, and 4 to 8 cm. at the cupola. The muscular composition as well as the subphrenic visceral make-up must play a role in this. The left hemidiaphragmatic crescent is largely a posterior structure made by the magenblase and spleen, its medial border delineated by the vertebral costophrenic sulcus. The esophageal hiatus does *not* penetrate this left hemidiaphragmatic crescent as illustrated so often, but is more anterior and usually medial. The erroneous implication that the cupola represents the crus is further abetted by the frequent presence of a longitudinal parallel strip of fat beneath it imparting to the medial border of the cupola a linear character. The hiatus on the sagittal projection must be situated within the limits of a triangle formed by the posteromedial sulcus described above, and the flat anterior contour of the diaphragm as the superior border, upon which the pericardium rests. On the usual right anterior oblique view this anterior contour of the diaphragm (superior border of the triangle) is often burned out, and the hiatal region may be projected below the cupola. The true relation of the lung to the diaphragm at the level of the hiatus can be obtained only by stratigraphy (Fig. 12) because the diaphragm in both planes is a series of complex curves. Enough to demonstrate the error of statements that a given finding in the esophagus is a certain distance "above or below the diaphragm" when the postero-medio-superior projection of the magenblase is used as the place of reference.

The hiatus has a specialized muscular border made up exclusively of the right crus in the majority of patients, but with a contribution from the left, and even a truly bilateral origin, in the occasional patient.[10,43] The right crus, after originating from several of the lumbar vertebral bodies, divides into a superficial thin layer to form the right border of the hiatus, and a much thicker deep layer to form the left border. The thickness of the right border approximates 2 mm., and the left varies between 4 and 12 mm., but never less than twice the thickness of the right. This thick left rim is said to account for the concave shadow at times seen medially through the magenblase.[56] Its inconstancy has been related to the great variation in thickness of the

left border of the hiatus as noted above, but the dynamic state of the crus must be important, too (Fig. 13). A tumor in the cardial region may produce an identical radiologic finding. Figure 14, a transverse section of the body at the level of the cardia, shows the anatomic substrate of this shadow, and other interesting relationships of the viscera as well.

Inspection of the muscular rim of the hiatus indicates that this cannot be a simple "hole for the transmission of the esophagus".[67] The thickened structure in relation to the rest of the diaphragm indicates that this muscle sling must do special work. It has been stated that this is the main component of the DECM.[1,32,66] This cannot be true for several reasons, among which are the satisfactory repair of hiatal hernia by making a new hiatus[46], the failure to produce an esophagitis by fashioning a significant

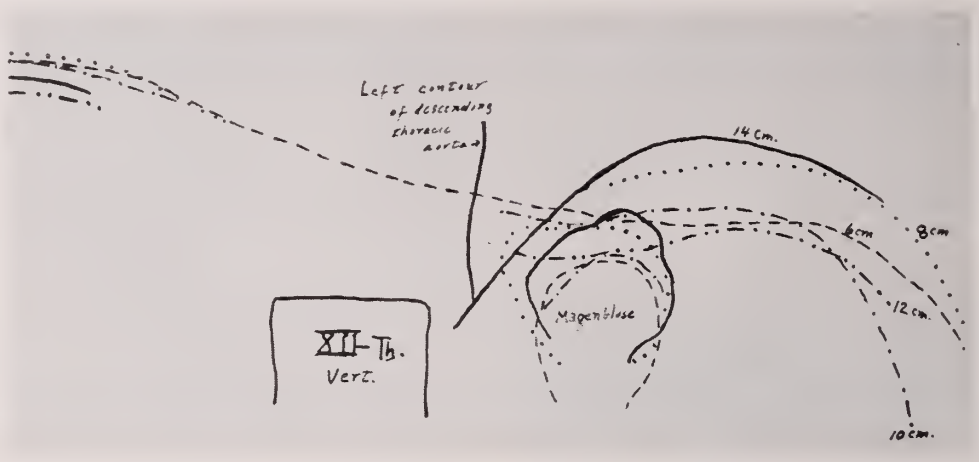


Fig. 12. These curves of the contours of the diaphragm were obtained from stratigrams at the indicated levels of an adult male lying prone. The complexity of the diaphragmatic "solid" is at once apparent, especially on the left side. It is apparent that the diaphragmatic crescent (level 14 cm.) is far posterior to the cardial region, and should not be used as a point of reference for observations within the esophagus. There is huge individual variation for these curves, as inspection of routine sagittal and lateral views of the chest will indicate.

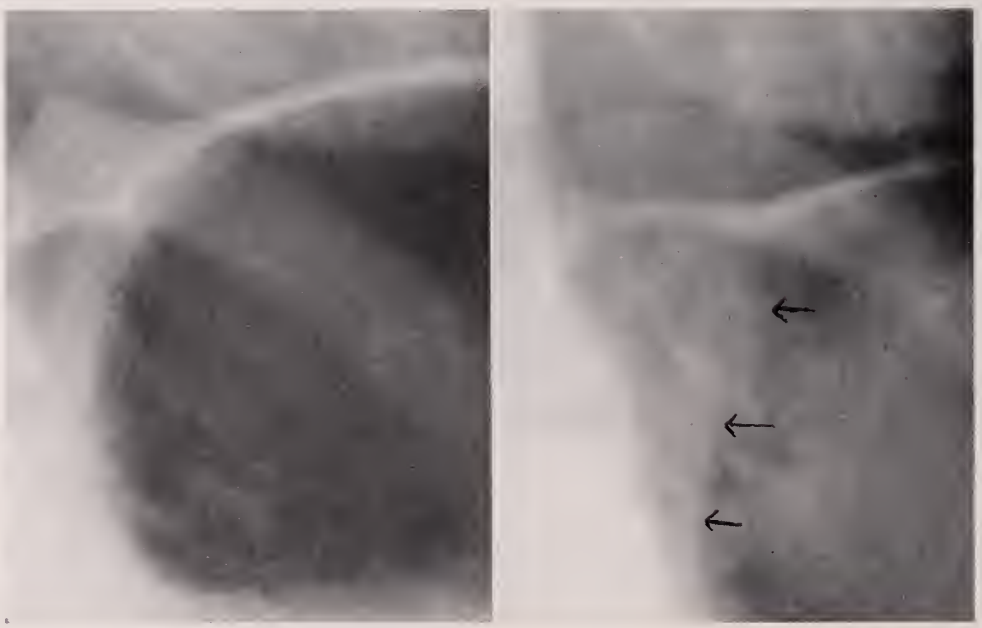


Fig. 13. This is one of a series of attempts to radiograph the cardial region during a belch. "A" is the resting state, and "B" during the attempt, a modified Valsalva maneuver. It is likely that the soft tissue shadow noted only in "B" represents the contracting, downward displaced right crus. It must be differentiated from the cardial button on Fig. 11. I have at times noticed a similar, but negative, shadow in the barium-filled fundus during the Valsalva maneuver, which disappeared, or was less marked, with relaxation, and have taken this, too, to be the contracting crural muscle.

abdominal esophagus[7], and the failure to cause esophagitis in the transected lower esophagus left intact with the cardial region, but production of esophagitis in the proximal end of the esophagus which had been brought through the hiatus and anastomosed with the stomach.[53]

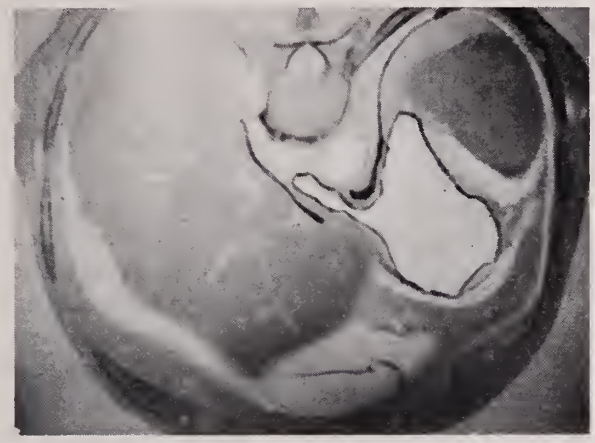


Fig. 14. Roentgenogram of transverse section of body through the cardial region. Right and left muscular margins of hiatus visualized with barium. Note how much thicker the left one is. Anatomic explanation for the convex defect at times seen in the cardial region. See text. (Taken from Roy-Camille: La Presse Medicale, 63:971-972, 1955).

What, then, is the function of the hiatal muscle sling? By its forces upon the lower esophagus exerted postero-medio-caudad, it increases the angulation of the esophagus, which has been considered an important factor in esophageal continence, just as the puborectalis muscle in continence of the rectum.[1] However, no marked change in angulation can be made out during normal respiration. To demonstrate that the diaphragm may be completely effective as a sphincter at times, however, let the reader attempt drinking a glass of water during the height of the effort of evacuation. If the effort is sufficiently vigorous, swallowing is impossible. Efforts have been made to discredit its role in producing the ampulla by ascribing on the unclear grounds discussed previously such action to the inferior esophageal sphincter and the constrictor cardiae, and also to the simple pressure differential between the pleural and peritoneal cavities during the Valsalva maneuver.[44] To prove this latter thesis, the differential was produced by inflating a balloon strapped to the anterior wall of the abdomen, with observations of the barium bolus within the esophagus at various pressure differentials. It is difficult to accept the illustration in reference 44 as one of a phrenic ampulla, or the statement that a high diaphragm means a relaxed diaphragm. Isometric contraction cannot be excluded. Furthermore, exclusion of the diaphragm in forming the phrenic ampulla because no motions of the hiatal margin are felt with the finger in the hiatus during operations is not acceptable because this is not universal experience.[17,37,44,66] Nor is the statement acceptable that persistence of ampullary formation after phrenicotomy excludes the role of the diaphragm, because the innervation of the hiatal sling may be bilateral[33], and the crura, being derived from Wolffian body mesoderm[47] may have innervation from the first lumbar nerve.

The main function of the hiatal muscle sling may be simply helping to keep the cardial region in its proper place below the diaphragm. In deep inspiration the intragastric pressure is highest, and the intraesophageal pressure is lowest, and the angle of His is widest. At this point, the tendency for regurgitation and retraction of the cardial region is maximal[15], and the contracted sling guards against both these occurrences. Similar forces are operative when there is any increase in intraperitoneal tension such as weight-bearing, etc.

All variations in snugness of the hiatus are found. The older the patient, usually the less snug is the hiatus. The radiologic boundaries between unusual laxity, hiatal insufficiency, and frank hernia are not sharp. It has been commonly implied that hiatal insufficiency is the first, and necessary, step in hernia formation. Probably in the paraesophageal variety, this is true (along with the requirement of a preformed peritoneal sac), but it is not necessarily true in the sliding variety. Two factors must be at play in the sliding hernia[4], varying in importance from patient to patient, but a sliding hernia resulting when their product reaches a certain constant. These factors are the resistance offered the upward migrating cardial region by the muscular hiatal sling, and the strength of its fixation below the diaphragm. It is logical that a lax hiatus with a moderately strong fixation may produce the same end-result, namely, hernia, as a moderately strong hiatus with lax fixation.

The radiologic diagnosis of hiatal insufficiency is frought with difficulty. The diagnosis of "epiphrenic pouch" is acceptable so long as its diagnostic non-specificity is admitted, and there is no reflux. If the clinical picture suggests esophagitis, esophagoscopy is in order.

A complete or incomplete ring shadow, projected above the cupola indicates either hiatal insufficiency or even hernia.[52] This appearance has been likened

to Saturn's ring in the European literature[11,37], and considered merely some redundant mucosa, and not abnormal. It has been regarded also as evidence of intussception of the esophagus into a hiatal hernia.[39] A more convincing example of intussception is found elsewhere[28], and it would appear that elongation of the esophagus (megaesophagus) is a necessary condition. True intussception does not resemble Saturn's ring.



Fig. 15. Abortive Saturn's ring. Lax hiatus? Valsalva maneuver.

In my opinion, Saturn's ring is made by entrapping either cardial or fundal stomach within the hiatus during the Valsalva maneuver, probably conditioned by a lax hiatus (Fig. 15), or a frank hernia (Fig. 16), but the possibility of this occurring normally cannot be excluded.

VIII. RECAPITULATION OF THE CONSTITUENTS OF THE DECM

Probably the main component is at the cardial region itself. All the other factors can be surgically obliterated without reflux provided that the cardial region remains intact, such as section of the hypertrophied vestibular muscle in achalasia (Heller's operation) and removal of the influence of the diaphragm by various experimental surgical procedures. A hypothetical conception of the cardial mechanism is this: a cardial constrictor band, assisted by other factors favoring the deepening of the angle of His, such as the submucosal tract of fibers coursing obliquely through the angle, and the magenblase itself, prepares the field for the operation of a mucosal valve, just as the intact aortic ring is a necessary condition for the competence of the aortic valves. The true vestibular sphincter, which, in spite of anatomic evidence, appears to have the same extension of the vestibule itself at times, and more localized at other times, is considerably weaker than the cardiac mechanism, and is of secondary importance. In certain hernias with loss of the cardial mechanism, the vestibular sphincter is called upon to take over, and may respond with work hypertrophy. In time, it too becomes insufficient with free reflux. The hiatal muscular sling, while not of prime importance, is useful mainly in maintaining the cardial elements below the diaphragm where they must remain for proper functioning, and is especially operative at those times when cardial elevation is most likely such as increased pressure differential. The main mechanism for keeping the cardial region below the

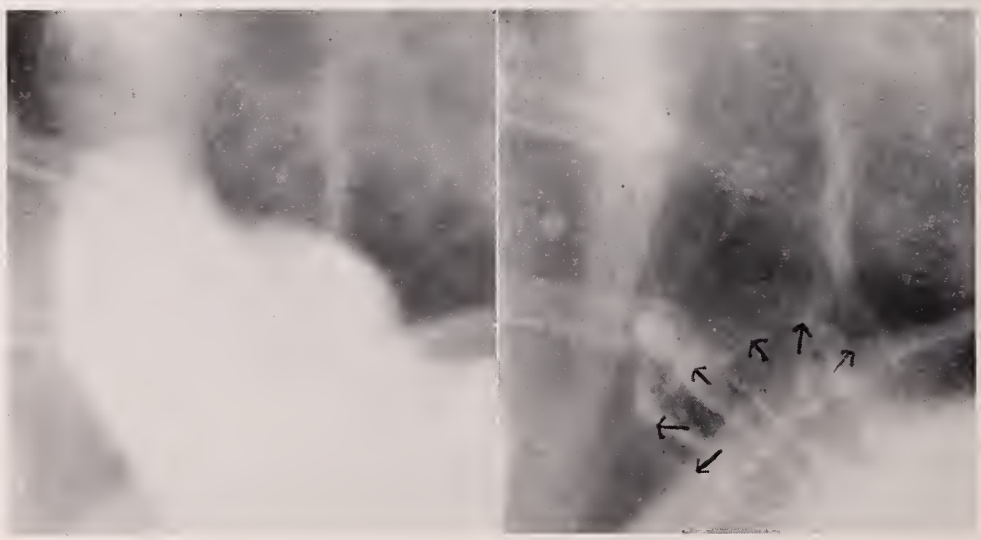


Fig. 16. A. Frank sliding hernia. B. Saturn's ring. Valsalva maneuver.

diaphragm, however, is the phrenoesophageal membrane.

IX. CAUSES OF FAILURE OF DECM

1. Regurgitation may be completely normal in the infant[6,58], especially when he is lying supine with the cardial region below the level of the gastric contents. It is strange that the question of normalcy should ever have arisen. Studies using cineradiography with image amplification have shown a different pattern of emptying mechanics in the lower esophagus in infants as compared with older subjects, and this has been ascribed to a more primitive intramural reflex as compared with the better developed arc depending on the intact vagus in the older ages groups.[12] This regurgitation of infants (chalasia) treated by simple elevation of the patient following feeding has a good outlook. However, regurgitation continues in some, with the production of esophagitis, bleeding, stricture and perforation.[2,6] Probably most of these patients represent something more serious than failure of the swallowing reflex to mature, such as sliding hernia and congenitally short esophagus. It is difficult to separate chalasia, hernia, and congenitally short esophagus, on the basis of the radiologic examination.

The French school refers to the condition of "malposition-cardiotubérositaire"[8,54,64], due to faulty fixation of the cardial region beneath the diaphragm especially because of poorly developed or absent phrenoesophageal membrane and poorly developed hiatal muscular ring. Indeed, the esophagus and aorta may have a common opening. The cardial region is patent resembling an inverted funnel. The magenblase is diminished, or absent, and the angle of His is wide. Reflux is present, but its absence should not invalidate the diagnosis. Surgical treatment is based principally on restoring the angle of His, with supplementary measures of fixing the fundus to the diaphragm and reconstructing the hiatus. Care should be taken in any estimation of the angle of His, in my opinion, because determination should be made only when the plane of entry of esophagus into stomach is at right angles to the incident ray and parallel to the film.

Another cause for failure of the DECM in infancy is a congenitally short esophagus. Statements that this condition probably does not exist are not acceptable, although the condition is not common. It is usually considered a type of hiatal hernia but this is incorrect, and the treatment based on such a conclusion can lead to disaster.[3] It is no hernia because the esophagogastric junction never was below the diaphragm. Positive diagnosis is possible only by the surgical determination that the blood supply of the distal esophageal reaches arises directly from the thoracic aorta, rather than from the displaced left gastric artery. However, suspicion of the condition may be offered by the endoscopic finding of unusually proximal extension of the gastric mucosa in the distal gullet. Certainly the radiologic diagnosis is of limited value[61]: the finding of short esophagus proves usually to be an esophagus of normal length which is easily replaced below the diaphragm, the shortness being due to the action of the longitudinal muscle in taking up the slack. The gastric mucosa in the gullet should not be called ectopic: true ectopic mucosa usually presents as islets in the proximal esophagus.[4] The gastric-lined gullets may distend, and, at least in older patients, have a characteristic doubly constricted appearance.[60]

2. The most important cause for failure of the DECM is displacement of the cardial region above the diaphragm, sliding hernia. The fundamental factors allowing this displacement are congenital or acquired weakness of the cardial fixing elements and the muscular sling of the hiatus, and atrophy of the supporting tissue within the hiatus, abetted by those states that predispose to increased pressure differential between the peritoneal and pleural cavities, such as obesity, tumor, pregnancy, etc. Intrathoracic factors are not well defined, but mediastinal displacement[34] and pleural scarring[40] may play a role. The opinion is commonly expressed that primary esophagitis with its spasm and scarring will initiate the sliding hernia.[13,25,34] This must be exceptional[4]; note that the intense esophageal spasm and scarring following ingestion of caustics do not cause hernia.

3. Failure of the DECM without sliding hernia. This has already been discussed as a frequent finding in otherwise normal infants, and is common in healthy adults as well.[44] Indeed, the surreptitious intra- and postprandial belch is so common as to escape notice (except by others). Water-brash is almost as common especially following a large meal. Dyspepsia in pregnancy, even without hiatal hernia, is common. It is identical to that resulting from reflux and must be due to it: heartburn, flatulence and postural regurgitation. One or more of the following factors are present in the failed DECM: change in posture, gastric distention, diminished peritoneal capacity, swallowing, and diminution of the cardial angle occurring during the respiratory cycle. The DECM, therefore, would be most likely

to fail under the following circumstances: a fat person bending over after a big meal, shortly after swallowing, and in inspiration. These factors are concerned in all cases of clinical regurgitation, whether a sliding hernia is present or not. Hiatal hernia is found in only a minority of cases of clinical regurgitation[44], but probably most of the cases that progress to chronic esophagitis are associated with hernia.

The cause for the failure of the DECM following a poorly tolerated food or associated with biliary or peptic disease is not certain; it is possible that under these circumstances there is pylorospasm with an active increase in gastric pressure.[44]

X. EFFECTS OF THE FAILURE OF THE DECM

Reflux of gastric contents into the esophagus may produce, in some patients, esophagitis. There are all degrees of severity ranging from slight reddening of the mucosa to ulceration, scarring, periesophageal induration, stricture and perforation. The esophagoscopic impression of the intensity of the reaction may be much less than the actual findings.[47] Not all patients with reflux present esophagitis. Many factors must be involved: a fundamental "ulcer diathesis" has been assumed by some. There is no relation between the esophagitis and the degree of gastric acidity[47], esophagitis being found even with achlorhydria. It is likely that the products of digestion and components of gastric secretion other than acid play a role. The quantity and chemical constitution of the saliva and the esophageal secretions may be of significance. That the cause of esophagitis is not solved is indicated by the charming account of a lady life-long ruminator, who, as a young girl singing in the choir fifty years before, would ensconce her toffy in her stomach while she sang a hymn, only to produce it later to enjoy it at her leisure.[1]

There are two types of ulceration in esophagitis: peptic erosion of the inflamed edematous squamous mucosa of the esophagus, and true peptic ulcer occurring on the gastric side of the esophagogastric junction. Being gastric mucosa, it is heir to all the diseases of the stomach, including cancer. Both types of ulcer may occur at the same time. It has been suggested that gastric ulcers may result from chronic contact of gastric juice upon the gastric end of longitudinal mucosal rents that cross the esophagogastric junction (Mallory-Weiss syndrome), this occurring only in the presence of a hiatal hernia.[21]

It would appear that conditions of stricture and spasm in the lower esophagus at times may initiate and propagate esophagitis and ulceration by virtue of stagnation. Certainly, the ulceration of achalasia can be explained thus. Even the hiatal muscle sling has been implicated as an obstructing agent in hiatal hernia, and the beneficial effects of phrenicotomy have been explained by relaxing the hiatus, and relieving the stagnation of gastric contents proximal to it.[51]

XI. HIATAL HERNIA

Although numerous excellent discussions of the pathology, clinical picture and treatment are available[4,22,36,42], certain features merit emphasis.

1. Sliding hernia. The term "sliding" has a definite surgical meaning[43,61]: one side of the hernial sac is composed of the viscus itself. The usual, and incorrect, connotation of the term is easy reducibility. Indeed, these hernias as encountered surgically are fixed: if anything is sliding, it is the barium of the radiologic examination.[43] Certainly some hernias encountered radiologically[1], especially in children[63], are reducible. In the sliding hernia, the cardial region is retracted upward, its bare spot (devoid of peritoneum) is posterior, the peritoneal reflexion being anterior and on both sides but ensheathing no viscera.[61] The sliding hernia is commonly, but not necessarily (Fig. 7), associated with loss of the cardial angle, which is an important step in loss of the DECM. The thickened companion shadow (Fig. 7) must be due to the thicker pericardial stomach and the peritoneal reflexion.

The pathologic anatomy of the hernia itself is not so important as the physiologic defect of loss of the DECM[33], which commonly results in esophagitis. Esophagoscopy is important not only to confirm the presence of esophagitis, but also to exclude an associated malignancy, which probably caused the defect in the DECM, rather than the chronically inflamed mucosa causing the malignancy.[50,59] Any radiologic diagnosis of esophagitis should be confirmed with esophagoscopy since a physiologically unimportant hernia may draw attention away from the offending organ.

It should be of prime concern to the radiologist to demonstrate reflux. Reflux demonstrated radiologically without hernia is unusual.[21,25,35] Many maneuvers have been recommended: the simple Valsalva test, straight leg raising with the patient supine, bending over to touch the floor with the patient upright and side-wise to the fluoroscopic screen, and a small pillow under the epigastrium with the patient

prone, being as good as any.[14,24] Demonstration may be whimsical, even dependent on the cooperation of the patient.[35]

2. Paraesophageal hernia. There are several fundamental differences between this and sliding hernia. The hernia is completely covered on all sides with peritoneum, and is said to occur in a preformed sac, probably a derivative of the non-obliterated right pneumato-enteric recess.[3] It has been stated that the actual herniation is through the muscular rim of the hiatus[61], a parahiatal, rather than paraesophageal hernia, since some muscle fibers are present between the true hiatus and the hernia. This has been doubted.[3,21] Whereas the pericardial portions of the stomach are involved in the sliding hernia (hence, the alternative terms of axial and concentric), the region of the greater curvature is involved in the paraesophageal type. These portions "roll" up into the sac, the greater curvature now being most cephalic and the pericardial portions remaining in situ. The alternative name, rolling hernia, should be avoided because ambiguity has already appeared.[3] The greater curvature drags its attached gastrocolic ligament into the sac. Rarely, another viscus may be present with the stomach in the hernial sac, or even without the stomach.[3]

The clinical picture, as opposed to the esophagitis accompanying the sliding variety, is dependent primarily on the space-occupying mass, and may be dominated by cardio-respiratory or gastrointestinal complaints, including bleeding. The bleeding may originate from ulceration or possibly circulatory changes within the herniated portion. Strangulation is an unusual occurrence and may defy radiologic demonstration. There is no reflux, and the cardial region remains intact below the diaphragm.

3. Mixed hernias. These are not well-defined, and include hernias with features of the two groups described above.

Although the value of radiology in the diagnosis of hiatal hernias should not be minimized, surgical visualization is needed for complete and positive identification as to type.[25,61]

XII. RATIONAL RADIOLOGIC CLASSIFICATION

The following radiologic classification of hiatal hernia has merit.

A. Cardial incisura lost, and above diaphragm (sliding hernia).
   The DECM disturbed or lost. Reflux present or imminent.

B. Cardial incisura preserved.
   1. Incisura below diaphragm (paraesophageal hernia).
      DECM preserved. No reflux.
   2. Incisura above diaphragm (mixed hernia). Reflux possible.

This classification depends primarily on the position of the cardial region which is the determining factor in the production of reflux.

Note: Special thanks are due Dr. Donald King, Richmond Memorial Hospital, Richmond, for his kindness in furnishing the stratigraphy, upon which Fig. 12 is based.

References

*1. Allison, P. R.: Reflux Esophagitis, Sliding Hiatal Hernia, and the Anatomy of Repair. Surg., Gynec. & Obst. 92:419-431, 1951.

2. Astley, R., and Carré, I. J.: Gastro-Oesophageal Incompetence in Children With Special Reference to Minor Degrees of Partial Thoracic Stomach. Radiology 62:351-362, 1954.

*3. Barrett, N. R.: Hiatus Hernia. A Review of Some Controversial Points. Brit. J. Surg. 42:231-244, 1954-1955.

*4. Barrett, N. R.: Discussion of Hiatus Hernia. Proceed. Royal Soc. Med. 45:277 290, 1952.

5. Beck, H. R.: Beitrag zur Roentgenologie der Hiatushernie und der Hiatusinsuffizienz. Fort. auf dem Geb. der Roentg. 81:276-283, 1954.

6. Blank, L., and Pew, W. L.: Cardio-esophageal Relaxation (Chalasia) Studies on the Normal Infant. Am. J. Roentgenol. 76:540-550, 1956.

7. Braasch, J. W., Ellis, F. H. Jr.,: The Gastro-esophageal Sphincter Mechanism: An Experimental Study. Surgery 39:901-905, 1956.

8. Bugnion, M.: Relaxation cardio-oesophagienne et séquelles de malposition cardio-tubérositaire. Radiol. Clin. 26:355-358, 1957.

9. Butin, J. W., Olsen, A. M., Moersch, H. J., and Code, C. F.: A Study of Esophageal Pressures in Normal Persons and Patients with Cardiospasm. Gastroenterology 23:278-293, 1953.

10. Carey, J. M.: An Anatomic Study of the Esophageal Hiatus. Surg. Gynec. & Obst. 100:196-200, 1955.

11. Catalano, D.: Radiologic Aspects of the Inferior Esophagus: The Phrenic Ampulla and the Cardiac Antrum. La Radiologia Med. 40:11-19, 1954 (In Italian).

12. Catel, W., and Garsche, R.: Studien bei Kindern mit dem Bildwandler. 1. Mitteilung: Anatomie und Motilitaet des distalen Oesophagus-Abschnittes. Fort. auf dem Geb. der Roentg. 85:1-11, 1956.

(*Indicates especially interesting and useful references.)

13. Dawson, J.: Reflux Oesophagitis and its Radiological Differential Diagnosis. Brit. J. Rad. 26:310-316, 1953.

14. Donaldson, S. W., Boyd, J. W., Harris, J. R., and Butler, E. B.: Evaluation of the Various Methods of Demonstrating a Hiatus Hernia. Am. J. Roentgenol. 75:262-278, 1956.

15. Donnelly, B.: Gastro-oesophageal Regurgitation and Oesophageal Hiatus Hernia with Special Reference to the Differential Diagnosis of Angina Pectoris. Brit. J. Radiol. 26:441-454, 1953.

16. Dorland, W. A. N.: The American Illustrated Medical Dictionary. Philadelphia, W. B. Saunders, 1937.

*17. Dornhorst, A. G., Harrison, K., Pierce, J. W.: Observations on the Normal Oesophagus and Cardia. Lancet 1:695-698, 1954.

*18. Eberl, J.: Zur roentgenologischen Darstellung und Analyse des Diaphragmas und Foramen oesophagicum. Fort. auf dem Geb. der Roentg. 81: 270-275, 1954.

19. Epstein, B. S.: The Effects of Sustained Deep Inspiration on the Normal Lower Esophagus and Phrenic Ampulla in Erect Adults. Am. J. Roentgenol. 78.1013-1019, 1957.

20. Evans, J. A.: Sliding Hiatus Hernia. Am. J. Roentgenol. 68:754-763, 1952.

*21. Fleischner, F. G.: Hiatal Hernia Complex. Hiatal Hernia, Peptic Esophagitis, Mallory-Weiss Syndrome, Hemorrhage and Anemia, and Marginal Esophago-gastric Ulcer. J.A.M.A. 162:183-191, 1956.

22. Gants, R. T.: Diaphragmatic Hernia. Review of Literature with Report of Illustrative Cases. Ann. Surg. 139:166-178, 1954.

23. Gray, H.: Anatomy of the Human Body. Twenty-Third Edition. Philadelphia, Lea & Febiger.

24. Hafter, E.: Roentgenologische und Klinische Aspekte der Hiatushernie. Radiol. Clin. 26:382-396, 1957.

25. Harrington, S. W.: Esophageal Hiatal Diaphragmatic Hernia. Surg., Gynec. & Obst. 100:277-292, 1955.

26. Hilscher, W. M.: Neue Gesichtspunkte zur Frage der Hiatushernien, Die oesophageale und paragastrale Hernie. Fort. auf dem Geb. der Roentg. 82:195-202, 1955.

27. Hodges, F. M., Snead, L. O., and Berger, R. A.: A Stellate Impression in the Cardiac End of the Stomach Simulating Tumor. Am. J. Roentg. 47: 578-583, 1942.

28. Howell, A. B.: Gross Anatomy. New York. D. Appleton-Century Company.

29. Ingelfinger, F. J. and Kramer, P.: Dysphagia Produced by a Contractile Ring in the Lower Esophagus. Gastroenterology 23:419-430, 1953.

30. Ingelfinger, F. J., Kramer, P., and Sanchez, G. C.: The Gastroesophageal Vestibule, its Normal Function and its Role in Cardiospasm and Gastroesophageal Reflux. Am. J. Med. Sci. 228:417-425, 1954.

31. Johnsrud, R. L.: The Repair of the Phrenoesophageal Ligament in Surgical Treatment of Hiatal Hernia. Surg., Gynec. & Obst. 103:708-710, 1956.

*32. Johnstone, A. S.: The Diagnosis of Early Gastric Herniation at the Oesophageal Hiatus. J. Fac. Rad. 3:52-65, 1951-1952.

*33. Johnstone, A. S.: Reflexions on Hiatus Hernia and Related Problems. Editorial. Radiology 62:750-753, 1954.

34. Johnstone, A. S.: Oesophagitis and Peptic Ulcer of the Oesophagus. Brit. J. Radiol. 28:229-240, 1955.

*35. Johnstone, A. S.: Discussion of Hiatus Hernia. Proc. Royal Soc. Med. 45:277-290, 1952.

36. Jones, F. A.: Discussion of Hiatus Hernia. Ibid.

*37. Jutras, A., Levrier, P., and Longtin, M.: Etude Radiologique de L'Oesophage Para-diaphragmatique et du Cardia. J. de Radiol. 30:373-416, 1949.

38. Kay, E. B.: The Inferior Esophageal Constrictor in Relation to Lower Esophageal Disease. J. Thorac. Surg. 25:1-15, 1953.

39. Klinefelter, E. W.: Invagination of the Esophagus in Hiatus Hernia. Radiology 67:562-567, 1956.

40. Kuosmanen, O.: Ueber das Vorkommen von Hiatushernien und Kardianinsuffizienz in Verbindung mit Pleuraschwarte. Act. Rad. Suppl. 153, 1957.

41. Lerche, W.: The Esophagus and Pharynx in Action. C. C. Thomas, 1950.

*42. Lyons, W. S., Ellis, F. H. Jr., and Olsen, A. M.: The Gastroesophageal "Sphincter" Mechanism: A Review. Proceed. Staff Meet. Mayo Clin. 31: 605-614, Nov. 14, 1956. (This is an especially good, short review.)

43. Madden, J. L.: Anatomic and Technical Considerations in the Treatment of Esophageal Hiatal Hernia. Surg., Gynec. & Obst. 102:187-194, 1956.

*44. Marchand, P.: The Gastro-oesophageal "Sphincter" and the Mechanism of Regurgitation. Brit. J. Surg. 42:504-513, 1954-1955.

45. Maximow, A. A., and Bloom W.: A Textbook of Histology. Second Edition. W. B. Saunders Co., 1937.

46. Merendino, K. A., Varco, R. L., and Wangensteen, O. H.: Displacement of the Esophagus into a New Diaphragmatic Orifice in the Repair of Paraesophageal and Esophageal Hiatus Hernia. Ann. Surg. 129:185-197, 1949.

47. Nicholson, S.: Diaphragmatic Hernia. Ann. Surg. 136:174-182, 1952.

48. Palmer, E. D.: An Attempt to Localize the Normal Esophagogastric Junction. Radiology 60:825-831, 1953.

49. Palmer, E. D.: Achalasia: Anatomy of the Cardia as it Relates to the Regional Pathophysiology. Radiology 67:79-83, 1956.

50. Pattinson, J. N., Osborne, G., and Morson, B. C.: Hiatus Hernia with Adenocarcinoma Arising in the Region of the Cardia. J. Fac. Rad. 7:90-101, 1956.

51. Pecora. D. V.: Observations of the Pathologic Physi-

ology of the Lower Esophagus in Sliding Hiatal Hernia with Comments on Surgical Treatment. Ann. Surg. 143:459-464, 1956.

52. Poppel, M. H., Zaino, C., and Lentino, W.: Roentgenologic Study of the Lower Esophagus and the Esophagogastric Junction. Radiology 64:690-700, 1955.

53. Repess, J. C.: Personal Communication. University of Virginia.

54. Robert, F., and Hoffmann, Th.: Zur Frage der Hiatusanomalien und des Kardiarefluxes Kardia-Fornix-Fehlanlagen. Fort. auf dem Geb. der Roentg. 81:255-270, 1954.

55. Rossetti, M.: Ueber die partielle Relaxation des rechten Hemidiaphragma. Radiol. Clin. 23:210-223, 1954.

56. Roy-Camille, R.: Remarques sur l'Orifice Oesophagien du Diaphragme. Intérêt Radiologique. La Presse Medicale. 63:971-972, 1955.

*57. Schatzki, R. and Gary, J. E.: The Lower Esophageal Ring. Am. J. Roentgenol. 75:246-261, 1956.

*58. Silverman, F. N.: Gastroesophageal Incompetence, Partial Intrathoracic Stomach, and Vomiting in Infancy. Radiol. 64:664-674, 1955.

59. Smithers, D. W.: The Association of Cancer of the Stomach and Oesophagus with Herniation at the Oesophageal Hiatus of the Diaphragm. Brit. J. Radiol. 28:554-564, 1955.

60. Som., M. L., Shapiro, J. J., and Jacobson, H. G.: The "Gastric-Lined" Esophagus with Esophagitis. Radiology. 69:856-859, 1957.

61. Sweet, R. J.: Thoracic Surgery. W. B. Saunders Co., 1950.

*62. Sycamore, L. K.: Radiologic Diagnosis of Hiatus Hernia. Gastroenterology. 31:169-189, 1956.

63. Thomsen, G.: Hiatus Hernia in Children. Acta Rad. Suppl. 129, 1955.

64. Wettstein, P.: Le carrefour oesophago-gastrique chez le nourrisson et l'adulte. Radiol. Clin. 26:359-381, 1957.

65. Wettstein, P., and Bardet, P.: Quelques problèmes posés par les hernies à travers le hiatus oesophagien. Radiol. Clin. 24:266-271, 1955.

66. Woolner. G. H.: Discussion of Hiatus Hernia. Proc-Roy. Soc. Med. 45:277-290, 1952.

67. Zaino. C., Poppel, M. H., and Blazsik, C. H.: Roentgenologic Study of the Abdominal Segment of the Esophagus in the Presence of Pneumoperitoneum. Am. J. Digest. Dis. 22:121-128, 1955.

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Exhibit of Rare Medical Books

The Medical School Library of the University of Virginia is exhibiting a few of the rare medical books which were given to the University Libraries some time ago by Dr. Stephen H. Watts. These are among the oldest medical books owned by the University Libraries and are usually locked up in the Rare Book Room of Alderman Library. The exhibit, installed March 23d, will be shown through June.

Dr. Watts, whose portrait hangs in the Medical Library, was a former professor of Surgery in the University of Virginia School of Medicine. He trained under Dr. William Stewart Halsted at Johns Hopkins University School of Medicine. Dr. Watts endowed the chair of surgery which now carries his name at the University of Virginia School of Medicine. He also set aside an endowment for the Medical School Library at this University.

The oldest material to be shown in the exhibit are two volumes of the 1550-51 edition of Galen's *Omnia quae extant opera,* printed in Venice. The 1555 edition of Vesalius' *Imperatoris medici de humani corporis fabrica libri septem* is also shown.

The exhibit also shows Fallopius' *La chirurgia,* Venice 1647. This is the man for whom the Fallopian tubes were named. He was a versatile writer on surgery, syphilis, mineral waters and other subjects.

Space is limited in the exhibit cases. Therefore, the only other book shown at this time from many given by Dr. Watts is William Harvey's *Exercitationes de generatione animalium* of 1680.

The Medical School Library is fortunate in having such rare and interesting books from the early history of medicine.

Vertigo of Central Origin

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THIS DISCUSSION is concerned with the differentiation of vertiginous lesions of central and peripheral origin and a consideration of some aspects of vertigo arising from lesions within the central nervous system. Recent advances in neuro-otology, including an accumulation of a substantial body of clinico-pathological and experimental evidence, have helped materially in localizing diseases along the vestibular pathways. Improved techniques in the caloric, rotatory and galvanic vestibular tests and in pure tone and speech audiometry have given us a better understanding of the puzzling and ofttimes bewildering symptom of vertigo.

When vertigo of central origin is suspected these tests furnish means of localizing peripheral lesions in the labyrinth and along the vestibular nerve, or in themselves, may localize a centrally placed lesion. They assist in interpreting the findings of the neurological examination and ancillary studies such as electroencephalography and angiography.

In recent years increased interest has been shown in the pathogenesis and treatment of cerebrovascular disease. This is a result of new concepts of therapy and a change in the heretofore hopeless attitude toward cerebral thrombosis. When the vertebral-basilar system is involved, vertigo often constitutes an important symptom. The symptom complex of vertebral-basilar arterial insufficiency can be recognized as an impending or actual thrombosis, and prompt surgical, anticoagulant or possibly enzymic therapy can be instituted. The classic symptomatology of major vessel thrombosis is of course well known to you. However in the case of "little strokes" the vertigo may be transient and unaccompanied by any other recognizable cerebral signs or symptoms. If the labyrinth is found to be within normal limits, attention can be focused on a central mechanism and an awareness of the possibility of cerebrovascular insufficiency will give the physician a firmer basis for successful management.

PERIPHERAL VERTIGO

Most cases of vertigo are caused by disturbances of the peripheral vestibular pathway, which is generally considered to extend from the end organ, along the vestibular nerve up to and including the vestibular nuclei in the brain stem. In otological practice, according to Cawthorne, less than 10% of cases of vertigo are of central origin; in general practice this incidence is greater. In as much as the diagnosis of vertigo of central origin is sometimes made by exclusion, a knowledge of the recent concepts of peripheral vestibular tract disease is necessary. Fortunately the diagnosis of peripheral types of vertigo is fairly definite. The current trend[1] in classifying the organic diseases of the labyrinth and eighth nerve system is illustrated in Fig. 1. These diseases are identified by the character and course of the vertigo, the response to caloric stimulation, the response to pure tone and speech audiometry, and the presence or absence of loudness recruitment. The qualitative caloric test of Hallpike is still being evaluated. Abnormal responses to this test, using the finding of canal paresis and directional preponderance, correctly interpreted, can help identify peripheral lesions as well as lesions within the cerebral hemisphere or the brain stem. Improvements in techniques of nystagmus recording and in rotational tests using minimal stimulation (cupulometry) refine these diagnostic methods, and may aid in understanding, for instance, the disorders of the utricle. The galvanic tests is considered by some investigators to distinguish between a lesion in the sensory end organ, one in the neurone, or one in the vestibular nuclei in the brain stem. The value of the tests for optokinetic nystagmus is still under investigation. Abnormal response to this test is said to be helpful in the diagnosis of cerebral lesions, in particular neoplasms and disseminated sclerosis.

Little mention will be made of the role of diseases of the middle ear, external canal, or eustachian tube in the causation of vertigo. They are regarded, as a rule, not as significant factors.

I would like to mention briefly, two disorders of the peripheral vestibular tract, vestibular neuronitis and postural vertigo, because of their importance in the differential diagnosis of vertigo of central origin.

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Fig. 1

AURAL VERTIGO

DISEASE	ETIOLOGY	CHARACTERISTICS
Meniere's Disease	Endolymphatic Hydrops	Episodic Vertigo with Tinnitus Fluctuating Deafness Poor Discrimination Score Recruitment—Abnormal Caloric Test
Vestibular Neuronitis	A Toxic or Inflammatory Lesion of Vestibular Neuron	Acute Vertigo—Spontaneous Nystagmus Abnormal Caloric Test—High Sed Rate Absent Auditory and Neurologic Signs
Postural Vertigo	A Traumatic, Low Grade Infection Or Vascular Occlusion of Otolith Apparatus? Or of Central Origin	Vertigo on Change of Head Position Positive Postural Test Positional Nystagmus Caloric Test Often Normal Cochlea Negative
Cerebello-Pontine Angle Lesion	Acoustic Tumor Arachnoiditis Meningioma	Early Loss of Hearing and Caloric Reaction Tinnitus—Vertigo Sometimes—Nystagmus Absent Corneal Reflex No Recruitment Facial Paralysis and Choked Disc Late Positive X-ray for Bone Erosion
Labyrinthitis Perilabyrinthitis Labyrinthosis	Toxic: Drugs-Systemic Foci Traumatic: Fracture—Concussion Post Operative Vascular: Thrombosis—Embolism Ischemia—Hemorrhage Temporal Bone Disease: Infection Tumor—Cholestheatoma Motion Sickness Allergy Epidemic Labyrinthitis Mumps—Encephalitis—Herpes	Vertigo and Nystagmus Usually Severe Tinnitus Deafness—Conductive or Perceptive Depending on Cause

VESTIBULAR NEURONITIS

Vestibular neuronitis resembles Meniere's disease, the most common disease of the labyrinth. The condition is characterized by attacks of paroxysmal vertigo and nystagmus, which initially may be quite marked. The significant differential factor is the normal cochlear function. This entity then is recognized by the normal audiogram, the absence of neurological signs implicating the central nervous system, and the abnormality of the caloric test. Vestibular neuronitis is considered a benign inflammatory process of uncertain etiology; concurrent infective disease elsewhere in the body is frequently present. The location of the lesion is probably in Scarpa's ganglion or in the neuron as far centrally as the vestibular nuclei. The electroencephalogram and cerebrospinal fluid has been found to be normal. The acute stage lasts for days to several weeks; a feeling of unsteadiness and minor dizzy sensations may continue for a month or two.

The acute phase of neuronitis may resemble the acute fulminating vertigo of herpes zoster oticus and other neurotrophic virus diseases affecting the eighth nerve. In herpes oticus the cochlear nerve is usually involved, a vesicular eruption in the geniculate zoster area is present, and an increase in the cell count and protein in the cerebrospinal fluid is found.

POSTURAL VERTIGO

The complaint of dizziness on change of position of the head or body is a very common one and may accompany many well organized, traumatic, vascular, neoplastic, degenerative and viral diseases of the brain and labyrinth. The demonstration of positional nystagmus in cases of postural vertigo identifies an entity now recognized as postural vertigo. By the use of the postural test, to elicit positional nystagmus, as outlined by Cawthorne, and based on the nature of the response, the characteristics of a peripheral and central lesion can be shown. Cawthorne[2] found in a series of 127 cases of positional nystagmus that 10% were associated with central nervous system disease, brain tumor, brain abscess, multiple sclerosis, and cerebrovascular disease, and 90% were of labyrinthine origin. Hallpike[3] prefers to describe this entity as "positional nystagmus of the benign paroxysmal type" due to a "lesion resulting from trauma, low grade infection or vascular occlusion affecting the otolith apparatus". Hallpike found abnormal response to the caloric test in 100% of his cases. Lindsay has written that in most cases of postural vertigo it is difficult to assign a definite etiology or a precise localization. In the older age group the symptom is due to circulatory inadequacy. In the functional group the

cause may vary from syncope to the hyperventilation syndrome.

Postural vertigo can then be considered a benign disease, usually of labyrinthine origin; the cause of the disturbance is often vascular and the trend in current treatment is in this direction. Cranial trauma, infections elsewhere in the body, allergic reactions to drugs and other substances, and systemic disease are all etiologic factors to be considered.

Postural vertigo may occur as an early symptom in multiple sclerosis and posterior fossa tumors. Observation of the progressive nature of the disease, the presence of associated neurologic signs or symptoms, and positive postural tests for positional nystagmus of the central type alert the clinician to the correct diagnosis.

Lindsay[4] has also reviewed some cases of acute vertigo of sudden onset; the acute symptoms gradually subside but often postural vertigo continues for months or years afterwards. His explanation for this situation is a unilateral partial loss of vestibular function due probably to a peripheral vascular occlusion.

CENTRAL VERTIGO

Vertigo of central origin may arise from many disorders of the brain stem or disease processes involving the ascending and descending vestibular pathways. It is most often a posterior fossa lesion, and only occasionally one above the tentorium. With few exceptions the vertigo of central lesions is not severe. The dizziness may be constant or transitory; if constant it tends in time to increase in intensity as contrasted to peripheral vertigo which gradually subsides spontaneously. If vertigo is associated with loss of consciousness, diplopia, sensory or motor disturbances, incoordination of movement, persistent spontaneous nystagmus, blurred vision or visual field defect, a centrally located lesion is probable. The presence of cranial nerve paralysis, increased intracranial pressure and other positive evidence of neurologic deficit, together with the findings on encephalography and other aids in the neurologic study, will help establish the nature and site of the disease. Acute remittent vertigo is most often of peripheral origin.

In the case of the transient vertigo, often associated with change of position of the head or body, the problem is more difficult. In the elderly individual it is associated with cerebral arteriosclerosis and hypertension, and is attributed to circulatory insufficiency. In this type of vertigo the examination of the peripheral vestibular mechanism is often normal; some degree of deafness may be present but the audiometric studies will likely show the graph of presbyacusis or acoustic trauma.

Sudden violent vertigo of central origin is due to vascular occlusion of a major cerebral vessel. The symptomatology of thrombosis of the posterior inferior cerebellar artery consists of an acute vertiginous crisis accompanied by dysarthria, laryngeal paralysis, sensory disturbances of the face, loss of pain and temperature appreciation on the opposite side of the body, cerebellar ataxia, and Horner's sign. In a young person severe persistent vertigo, unassociated with auditory symptoms, is suggestive of multiple sclerosis involving the brain stem. The syndrome described by Bruno—paroxysmal vertigo, headache and vomiting, all on change of position of the head—is due to a lesion in the region of the fourth ventricle. Patients with this syndrome exhibit a head splinting, and they attempt to move their body and head as a unit.

Sir Charles Symonds[5] has written on some of the characteristics of vertigo of central origin. He states that lesions of the vestibular nuclei and their connections in the brain stem are distinguished by associated damage to the neighboring nuclei and tracts and by the tempo of the lesion. In the case of the acute lesion such as a vascular occlusion, the severe initial symptoms are followed by slow incomplete recovery but the nystagmus persists. In labyrinthine disease the nystagmus is absent except during vertigo.

Symonds also states that acute vertigo is rare in cerebellar disease. Usually chronic persistent vertigo with incoordination is present. The midline cerebellar lesions present an ataxic gait with a continuous sense of unsteadiness. Increased intracranial pressure, especially from infratentorial lesions, may cause vertigo of the paroxysmal type due to pressure on the blood supply to the vestibular nuclei.

The symptoms of indefinite or vague vertigo in the adult patient may be of systemic origin (Fig. 2). The diagnosis is based on the findings of the general physical examination.

NYSTAGMUS

The presence of spontaneous nystagmus, or induced vestibular nystagmus of abnormal types, is a significant clue in the diagnosis of vertigo of central origin, especially in posterior fossa lesions. Spontaneous nystagmus due to a peripheral lesion is intense and limited in duration to a few weeks by compensatory mechanisms; if the nystagmus is

mild and prolonged beyond that time a central lesion should be suspected. Nystagmus without vertigo is of ocular, cerebellar or brain stem origin. Vertical oblique nystagmus indicates a central lesion, usually in the cerebellum or in the brain stem. Spontaneous falling in the direction of the fast component of the nystagmus is indicative of central origin; the opposite is true of peripheral disease. A spontaneous nystagmus to one side, together with a non-reactive labyrinth on the same side is suggestive of an intracranial lesion. A non responsive vestibular test in the presence of good hearing is indicative of centrally placed lesion. The tests for optokinetic nystagmus induced by rotating drum of Barany are of value in the diagnosis of intracranial lesions. Cawthorne[1] and his associates have shown that this test is of localizing value not only in cortical lesions in the region of the supramarginal and angular gyri, but also in "organic lesions involving the optokinetic pathways at lower levels within the brain stem, in particular intramedullary neoplasm and disseminated sclerosis".

The intricate network of connections of the vestibular centers with the eye muscle nuclei, the cortico and cerebello-vestibular pathways, and the vestibulospinal tract have, in general, been proved experimentally, and the clinical characteristics of irritative or destructive lesions involving these structures can be recognized. Crosby[6] writes, "The fact that nystagmus is being elicited from a central vestibular rather than a peripheral lesion is determined by noting the accompanying signs or symptoms. For example, the vertical nystagmus elicitable from either superior vestibular nucleus may be accompanied by a facial weakness since the facial root passes along the medial side of this nucleus as it descends toward its level of emergence from the brain, or by loss of sweating on the same side of the face since the brain tract, the lateral reticulo-spinal tract, related to such sweating lies not far ventral to the superior vestibular nucleus. With involvements of the lateral vestibular nucleus producing destruction of the ventrolateral vestibulo-spinal tract, the patient will fall away from the side of the lesion, although in section of the vestibular root he falls toward the side of the lesion."

MULTIPLE SCLEROSIS

Vertigo in multiple sclerosis is transient and evanescent, but is said to be initially severe in 7% of the cases. In a series studied by Phillips[7] vertigo was found to occur in 35% of the patients. The otologic symptoms of deafness and tinnitus are occasionally present. The diagnosis is based on the major neurologic signs of disseminated sclerosis indicating involvement of various parts of the central nervous system. In the early stages of the disease the diagnosis may be overlooked if vertigo, nystagmus, and disturbance of gait and balance are prominent symptoms. The progressive development of pyramidal tract signs, tremor, sensory disturbances, and the distinctive ocular manifestations enables a definite diagnosis.

Fig. 2

Systemic Causes of Vertigo

Stokes—Adams Syndrome and Other Cardiac Arrhythmias	Air Embolism
Hypersensitive Carotid Sinus Reflex	Allergy
Arterial Hypertension and Hypotension	Hyperventilation Syndrome
Polycythemia Vera, Purpura, Anemia, Leukemia	Drug Intoxication
Cerebral Arteriosclerosis	Foci of Infection
Diabetes, Gout, Hypothyroidism, Menopause	Anxiety—Tension State

CEREBELLO-PONTINE ANGLE LESION

Acoustic neurofibromata represent 7-10% of all brain tumors, and are an ever present diagnostic possibility when deafness and vertigo are symptoms. The syndrome of the angle lesion is well established: early loss of cochlear and vestibular function, loss of corneal sensation, nystagmus, headache, and later, facial paresis, signs of increased intracranial pressure, and x-ray evidence of bone erosion. The loss of hearing is of the perceptive type without loudness recruitment.

Acute vertigo is an unusual symptom in angle tumors. In a series of 150 cases Brown[8] found 35% of his patients with a complaint of dizziness, lightheadedness, or postural unbalance. In 11% of the cases true vertiginous symptoms were reported, but in only 3 out of 150 patients was the diagnosis of Meniere's disease considered. The characteristic neurologic findings definitely pointed to the correct diagnosis.

EPILEPSY

Vertigo constituting an introductory aura in epilepsy has been described in as many as 20% of

seizure cases. Loss of consciousness, which is rarely seen in labyrinthine vertigo, is the significant factor. The vertigo, of course, is not present after the return of consciousness. The history and electroencephalographic report decide the diagnosis. In this regard mention can be made of an article by Pederson and Jepsen[9] who described cases of paroxysmal vertigo as an epileptic aura, but without seizures. Some other characteristic type of epileptic seizure developed at a later date. The cochlear function was normal in all cases.

TUMORS

The symptom of vertigo originating from tumors of the posterior fossa is fairly common. In a series of 158 patients with cerebellar tumor, Grant[10] found vertigo present in 70 cases. The vertigo in this situation is chronic, progressive and persistent and associated with nystagmus, incoordination of movement, ataxia and headache. Vertigo of cerebellar origin is most likely in acute lesions as thrombosis of the posterior cerebellar artery or cerebellar tumors which compress or invade the vestibular nuclei. The differentiation of vertigo of an otogenic cerebellar abscess from labyrinthitis is most difficult. The vertigo of tumors of the fourth ventricle can be sudden in onset on change of position of the head. Vertigo from brain stem lesions is diagnosable by the focal signs of the area involved. The task of identifying temporal lobe tumors has been assisted by the method of caloric testing advocated by Hallpike and his associates and by tests for auditory discrimination. Bilateral loss of labyrinthine response is said to indicate mid brain tumors.

VASCULAR DISEASE

The importance of vertigo in diagnosing vascular disease of the posterior fossa cannot be over emphasized. Current advances in knowledge have made it possible to localize vascular lesions within the vestibular nuclei themselves. The lesions above or below the entry of the eighth nerve present different clinical manifestations, recognized by neurologic, audiometric and caloric disturbances. The concept of intermittent insufficiency of the vertebral-basilar arterial system and thrombosis of the basilar artery is less well known.[11] This syndrome is characterized by episodic attack of visual dimness, weakness of the limbs, dysarthria, dysphagia, diplopia and vertigo. Between attacks the patient is well and the neurological examination is negative. The significance of these attacks lies in the recognition of these premonitory symptoms, however mild, as a warning of a possible future basilar artery thrombosis, and appropriate therapy instituted. A single attack may be diagnostic if several of the symptoms of the syndrome are present at the same time. Usually, however, the pattern of periodic return of one or more symptoms over a period of time suggests the correct nature of the disease.

The tendency in the case of temporary, vague or indefinite remittent vertigo, is to localize the disturbance in the benign atmosphere of the ear. Close questioning and careful examination may reveal other posterior fossa signs or symptoms or on the other hand, aural symptoms. The problem arises when the static labyrinth is involved without symptoms indicating a labyrinthine dysfunction, sometimes even with normal cochlear function and a normal response to caloric stimulation. In this stiuation the patient should be kept under observation and other characteristics of central or peripheral localization may develop to help define the diagnosis.

This concept provides some hope in the preventive treatment in early cerebrovascular disease. If the transient episodes of vertigo and vomiting can be localized as a central lesion before the stage of infarction, long term anticoagulant or other methods of treatment will provide an improved prognosis.

For many years Alvarez[12] has written of the importance of "little strokes". Among other symptoms, a sudden attack of dizziness, nausea and vomiting constitute an important part of this syndrome. A knowledge of many facets of the "small stroke" will save the patient much useless and misdirected treatment. Greater attention should be paid to the symptoms of momentary confusion, heaviness or numb feeling of the extremities, headache and defective memory in a patient who previously enjoyed good health of mind and body. Sometimes the intense upsetting symptom of vertigo overshadows other significant symptoms and these are overlooked by physician and patient.

ENCEPHALITIS—METAENCEPHALITIS

Acute encephalitis of the pons and cerebellum[13,14] is an unusual and interesting entity, of clinical importance in the differential diagnosis of neoplasms of the brain stem and acute multiple sclerosis. Brain stem encephalitis is a disease of unknown cause, often associated with upper respiratory infections. The clinical picture is that of neurologic signs and symptoms localizing the disease to the brain stem. The paretic disturbances of the cranial nerves from

the third to the twelfth are transient. Vertiginous symptoms are present in over half of the cases. The benign course of the disease and favorable outcome confirm the diagnosis.

EPIDEMIC PARALYTIC VERTIGO

Epidemic paralytic vertigo or Gerlier's disease is a rare entity. It consists of paroxysmal attacks of severe vertigo associated with flaccid paralysis, ptosis, diplopia, amblyopia and dysphagia. The attacks last about ten minutes and return daily.

TRAUMA

The evaluation of vertigo due to cerebral trauma is often an interesting and complex problem. Skull fractures extending into the temporal bone are accompanied by the salient sign and symptoms of craniocerebral trauma plus tinnitus, vertigo and deafness. Partial permanent deafness is said to occur in about 50% of patients with severe head injuries.[15] The evaluation of vertigo in cases of cerebral and labyrinthine concussion and the post concussional syndrome is more difficult. It is of variable severity, with headache, and often postural in type. If the test for postural vertigo and positional nystagmus is positive a definite diagnosis of organic disease can be made.

TREATMENT

The treatment of vertigo of central origin depends on accurate diagnosis, and is based on the management of the cause of the symptom. The role of anticoagulant and enzymic therapy in cerebrovascular disease is still under study.[16] There is little doubt that the results reported by some authors have been encouraging. The institution of rest and sedation is still fundamental. Dimenhydrinate and diphenhydramine are useful drugs in acute vertigo, especially when given intramuscularly or by rectum. The use of vasodilation agents in the treatment of vertigo of all types has been successful in the experience of many clinicians. Pool[17] has recently shown that the larger cerebral arteries especially the basal arteries, are capable of vasospasm and vasodilatation. Topical application of procaine and papaverine were effective in producing vasodilatation, although the intracarotid injection of these drugs were ineffective. It has been said that the good results of vasodilating therapy depend on prevention of vascular spasm rather than the production of vasodilatation, and the breaking up of the vasospastic reflex. On the other hand some investigators[18] contend that the cerebral arteries cannot contract, and the mechanism of cerebral stroke is thrombosis, embolism, hemorrhage or vascular insufficiency. Hypotension induced by a number of different conditions apparently is the important factor in producing cerebral vascular insufficiency in the presence of narrowed vessels. With normal blood pressure adequate capillary pressure can be maintained or collateral blood flow can be established to overcome the local ischemic changes. It is a general rule in the treatment of vertigo to combine methods of therapy rather than trying one remedy after another.

Bibliography

1. Cawthorne, T., Dix, M. R., Hallpike, C. S., and Hood, J. D.: The Investigation of Vestibular Function. Brit. Med. Bull. 12:131, May 1956.
2. Cawthorne, T.: Positional Nystagmus. Ann. Otol., Rhinol. and Laryngol. 63:481, June 1954.
3. Carmicheal, E. A., Dix, M. B., and Hallpike, C. S.: Pathology, Symptomatology and Diagnosis of Organic Affections of the Eighth Nerve System. Brit. Med. Bull. 12:146, May 1956.
4. Lindsay, J. R. and Hemenway, W. G.: Postural Vertigo Due to Unilateral Sudden Partial Loss of Vestibular Function. Ann. Otol., Rhinol., and Laryngol. 65:692, Sept. 1956.
5. Symonds, Charles: The Significance of Vertigo in Neurological Diagnosis. J. Laryng. and Otol. 66: 295, July 1952.
6. Crosby, E. C.: Nystagmus as a Sign of Central Nervous System Involvement. Ann. Otol., Rhinol., and Laryngol. 62:1117, Dec. 1953.
7. Phillips, J. W.: Otologic Symptoms of Multiple Sclerosis. Laryngoscope 62:271, March, 1952.
8. Brown, H. A., Love, J. G., Adams, N. D.: Otologic Evaluation of Unilateral Acoustic Neurofibromata. Laryngoscope 62:250, Mar., 1952.
9. Pederson, E., and Jepsen, O.: Epileptic Vertigo. Acta. Psychiat, et. Neurol. Scandinav. Supply. 108:306-310, 1956.
10. Grant, F. C., Webster, J. E. and Weinberger, L. M.: Unusual Symptomatology with Tumors of the Cerebellum Based on 158 Verified Cases. Am. J. Med. Sci. 202:313, 1941.
11. Seikert, R. G., and Millikan, C. H.: The Concept of Early Diagnosis in Strokes. Arch. Int. Med. 101: 872, May, 1958.
12. Alvarez, W. C.: Cerebral Arteriosclerosis with Small Commonly Unrecognized Apoplexies. Geriatrics 1:189, 1946.
13. Kavanaugh, G. J. and Goldstein, N. P.: Acute Idiopathic Metaencephalitis. Proc. Staff. Mayo Clinic 33:53, February 5, 1958.

14. Moller, Folke.: Brain Stem Encephalitis and Epidemic Vertigo. Acta. Psychiat. et. Neurol. Scandinav. 31:107-115, 1956.

15. Schuknecht, H. F. and Davison, R. C.: Deafness and Vertigo from Head Injury. Arch. Otolaryng. 63: 513, May 1956.

16. Sussman, B. J. and Fitch, T. S. P.: Thrombolysis with Fibrinolysin in Cerebral Arterial Occlusion. J.A.M.A. 167:1705, August 2, 1958.

17. Pool, J. L., Jacobson, S., and Fletcher, T. A.: Cerebral Vasospasm—Clinical and Experimental Evidence. J.A.M.A. 167:1599, July 26, 1958.

18. Rothenberg, S. F. and Corday, E.: Etiology of the Transient Cerebral Stroke. J.A.M.A. 164:2005, August 31, 1957.

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United Cerebral Palsy

A stigma of guilt is erroneously associated with cerebral palsy. Actually, cerebral palsy is a general term for a group of disorders caused by injury to certain brain cells. It is neither contagious nor hereditary. Although all the causes are not yet known, it is known that it can result from faulty development of brain cells before birth, physical injury, prolonged high fever and other causes later in life.

The most common effects are an awkward, involuntary gait, lack of balance, gutteral speech and grimacing. It may also be associated with sight and hearing impairments, reasoning power and other disturbances reflecting brain damage.

Through organizational efforts of interested persons and parents of cerebral palsied children, the United Cerebral Palsy of Richmond was formed in 1953 to provide more and better services for the cerebral palsied. Chief efforts are directed toward support of the Occupational Curative Workshop, an out-patient treatment center for physically handicapped children. From a meager start, it now provides daily treatment for 55 children, consisting of occupational and physio-therapy and speech therapy. Services of two full time therapists are required. A speech teacher is employed as 60% of the children have speech difficulties.

Headquarters of the Workshop and United Cerebral Palsy of Richmond are located at 201 West Brookland Park Boulevard. These quarters, a former bank building, were occupied in 1956, in a move from the Mayo Memorial Church basement.

The first Wednesday of each month a diagnostic and treatment planning clinic is held for cerebral palsied at the Workshop. Patients come from as far away as Emporia. The clinic is directed by Dr. Earnest B. Carpenter, orthopedist, and Dr. Gayle G. Arnold, pediatrician, local doctors who serve for a nominal fee. In the four years of operation 125 children have been seen at the Clinic at approximately 3-month intervals. Space is also provided in the building for the Mayo School for Orthopedic Children. In 1941 the Workshop asked the Richmond School Board for a teacher for 8 cerebral palsied children. At present there are 4 teachers and 38 children, 29 of which are cerebral palsied, attending junior primary through high school. Diplomas are awarded by Thomas Jefferson High School.

During May the annual fund campaign is conducted. The goal this year is $35,000. The bulk of funds—75%—remains here for state and local services. The remainder helps to finance the national program of research, education and training. Of the $1.7 million raised nationally last year, over $500,000 went to research grants for hospitals and universities.

Chronic Idiopathic Jaundice Dubin-Johnson Disease

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IN 1954 Dubin and Johnson described a new entity under the title of Chronic Idiopathic Jaundice with Unidentified Pigment In Liver Cells.[1] They present strong clinical, laboratory and histochemical evidence that this condition is distinct from Gilbert's Disease (constitutional hyperbilirubinemia), chronic post-viral hepatitis and obstructive jaundice, albeit there are points of similarity.

The Dubin-Johnson disease is characterized by chronic jaundice, which may be intermittent and aggravated by intercurrent diseases. Vague abdominal pain, fatigue, dark urine and slight hepatomegaly are usually present. The diagnosis is easily established by needle biopsy of the liver. The dark brown or black character of the gross specimen is so striking that to the aware observer this is in itself nearly diagnostic. Histologically the hepatic cells contain coarse brown granules which are remarkably localized to the cells of the central region of the lobule. There is evidence that the pigment belongs to the lipofuscin family. No other constant histologic change is noted in the liver.

Dubin believes that the disease is an inborn error of metabolism whereby the prime defect lies in the inability of the liver to adequately excrete certain substances. He cites the following points of evidence for this thesis: "(1) the liver can conjugate indirect bilirubin with glucuronic acid but presumably has difficulty in excreting the conjugated bilirubin, hence the accumulation of direct reacting bilirubin in the serum and the spilling over of this water-soluble bilirubin in the urine; (2) the increased amount of urobilinogen in the urine may similarly reflect inadequate hepatic excretion; (3) nonvisualization of the gallbladder on cholecystography is probably due to inability of the liver cells to excrete the dye; (4) retention of bromsulphalein is again evidence of insufficient excretion; (5) the accumulation of pigment (lipofuscin) in the liver cells probably is also the result of inadequate hepatic excretion."[2]

Dubin's recent review included fifty cases which were culled from the files of the Registry of Hepatic Pathology and the literature, plus four cases published after his article was prepared for publication. All cases recorded to date have been in Caucasians, except for one which occurred in a Negro. The prognosis is good. No treatment is necessary.

CASE REPORT

A 37 year old Korean civil servant entered the Alexandria Hospital with the chief complaint of jaundice. He had had recurrent bouts of jaundice characterized by "yellow urine" and jaundice sclerae since he was 23 years of age. He also complained of "discomfort" in the right hypochondrium. About two months prior to admission he developed anorexia and generalized malaise.

Physical Examination: Pulse 84. Temperature 98.4. Respirations 20. Blood Pressure 110/75. Examination was negative except for slight icterus of the sclerae and slight tenderness to deep palpation over the right hypochondrium. Liver and spleen were not palpable.

Past History: Amebic dysentery occurred at age 9 with recurrent attacks each summer for 6 years. He had malaria as a child. When he was 23 years old he had his first recognizable bout of jaundice and was hospitalized in Korea. Following this illness he believed that his urine persisted in being darker than before and also from this time on he noticed that he tired easily.

Family History: Father and mother alive and well at age 60. Of five siblings, one brother has been jaundiced for 10 years. The patient is the father of two healthy children.

Hospital Course and Treatment: His oral temperature varied between 97° and 98.6° F. throughout his hospital stay of six days. The admission hemogram showed 15.0 Gms. of hemoglobin and a hematocrit of 46%. WBC was 7,400 with 46% segmented forms, 5% band forms, 47% lymphocytes and 2% eosinophils. The urine was dark amber but showed no protein nor significant formed elements.

Serum cholesterol 199 mg/100 ml; Cholesterol esters 167 mg/100 ml. Icterus index 40 units; Direct reaction bilirubin 5.0 mg/100 ml; Indirect reaction bilirubin 4.0 mg/100 ml. Cephalin flocculation was 3+ after 24 hours and 4+ after 48 hours. Thymol turbidity was 8.3 units. Alkaline phosphatase 4.4 Bodansky units. Total serum protein 7.0 Gms/100 ml. Cholesterol 166 mg/100 ml. There was retention of 17% bromsulphalein 45 minutes after a test dose of 5 mg/kilo of body weight. Prothrombin consumption test was normal. Serum albumin 3.2 Gms/100 ml. Serum globulin 3.8 Gms/100 ml. The electrophoretic pattern (Fig. 1) was not unusual although depicted a slight increase of gamma

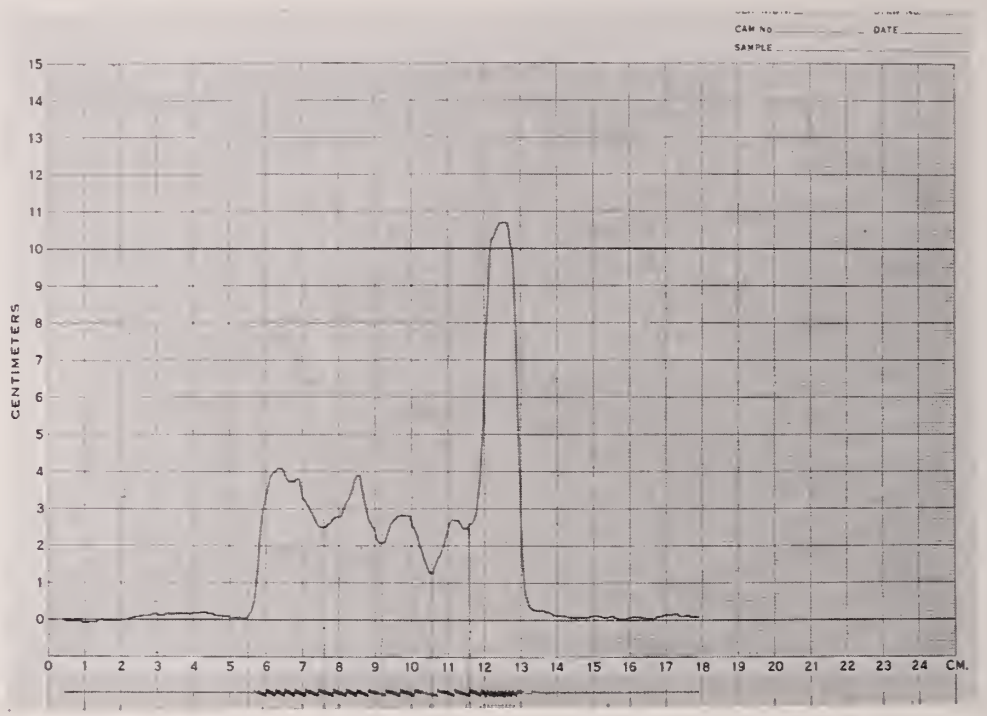


Fig. 1

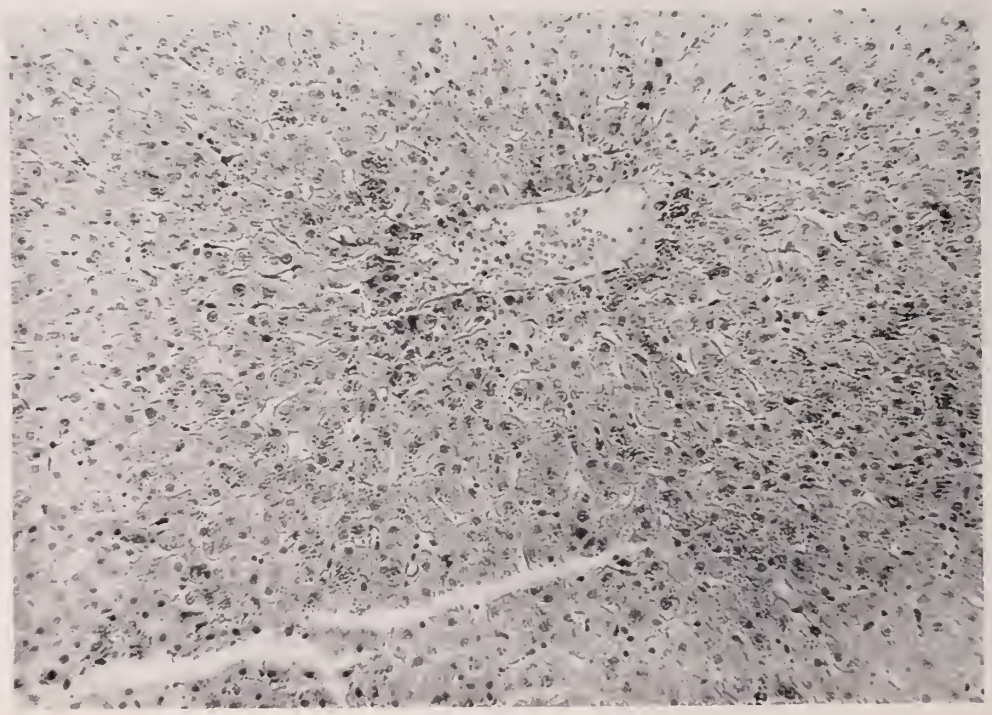


Fig. 2

globulin. A 24 hours urine specimen contained 0.01 mg. of urobilinogen per 100 ml. A stool specimen showed hookworm ova and Trichocephalus trichiuris ova. Prothrombin activity 60% (control 11 seconds; patient 13 seconds). The chest x-ray was reported as "normal". After it was determined that the bleeding time, clotting time and clot retraction times were within normal limits, a Vim-Silverman needle biopsy of the liver was performed. Grossly, the liver was dark brownish black. Microscopically, there was intense pigmentation of the hepatic cells with coarse dark brown pigment (Fig. 2). The pigment was localized to the centrolobular region and was virtually absent from the Kupffer cells (Fig. 3). The pigment did not give the Prussian Blue reaction for iron. When the tissue was subjected to digestion with saliva prior to staining with the periodic acid-Schiff stain, many of the granules were positive. Oil red-O, acid fast, hemofuscin, hematoidin and bile stains* were negative.

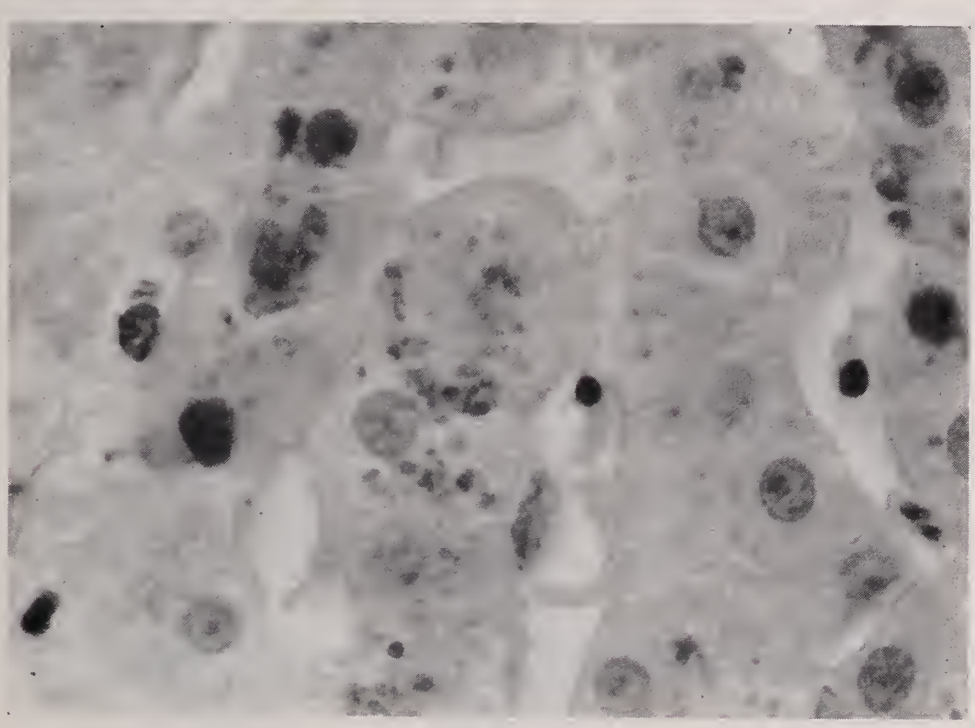


Fig. 3

SUMMARY

1. A case of Chronic Idiopathic Jaundice (Dubin-Johnson Disease) is reported.
2. The first case of Chronic Idiopathic Jaundice in an Oriental is reported.

* Bile stain was done by Miss Mary Jo Hall, Department of Histochemistry, Naval Medical School, Bethesda, Maryland. The staining procedure was devised by Miss Hall and will be published by her later.

Bibliography

1. Dubin, I. N. and Johnson, F. B.: Chronic Idiopathic Jaundice with Unidentified Pigment in Liver Cells. Medicine 33: 155, 1954.
2. Dubin, I. N.: Chronic Idiopathic Jaundice. Am. J. Med. 24: 268, 1958.

Alexandria Hospital
Alexandria, Virginia

Urinary Bladder Harboring Mechanical Pencil

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THE AUTHORS of this report recently observed an eighteen year old girl whose urinary bladder had retained a mechanical pencil for a period of approximately three years.

The patient, an attractive, apparently well adjusted, intelligent, white, high school student, first sought medical advise because of severe burning, frequency, and urgency of urination of several weeks duration. The history was otherwise vague and uninformative. The general examination was essentially negative except for the vaginal findings. Projecting into the anterior wall of the vagina near the cervix, for a distance of about 1 cm, was a hard mechanical object, resembling the point end of a mechanical pencil. The object was firmly fixed and could scarcely be moved in any direction. The urinalysis showed innumerable WBC and 8-10/RBC per hpf.

The patient was admitted to the hospital on December 8, 1958, where an intravenous urogram showed a large avoid calcific density within the urinary bladder, measuring 3½ x 2½ inches, and having a somewhat laminated appearance. Lying diagonally within this calcification was a radiolucent line with a metallic arrow point at its distal end and a round metallic density at its proximal end. There was moderate calyectasis and pyelectasis on both sides.



Fig. 1. Plain x-ray of abdomen.

On December 11, 1958, under general anesthesia, the foreign body encased within a large calcium stone was removed through a suprapubic incision. The bladder wall was about four times its usual thickness and there was intense generalized hyperemia of the mucous membrane. There was a small sinus leading from the floor of the bladder into the vaginal fornix, which had been produced by the eroding point of the metallic pencil.

The bladder was closed in two layers with fine chromic catgut and the abdominal incision was

From The Shenandoah Hospital, Roanoke.

closed in layers in a routine way. Bladder drainage was provided by a small urethral catheter brought out through the superior end of the abdominal incision. Convalescence was uneventful and the patient was discharged from the hospital on December 23, 1958, twelve days after the operation with no complaints and in good general condition.



Fig. 2. The surgical specimen.

The pathologic report by Dr. Daniel Leavitt reads: "The specimen consists of a bladder calculus, measuring 9 x 6 x 6 cm. Projecting through it is a mechanical pencil, 11 cm in length."

It is a remarkable fact that this child was able to tolerate a mechanical pencil in her urinary bladder for such a long time. She admitted inserting the pencil through the urethra into the bladder when she was fourteen years old, where it became inaccessible and could not be removed. She withheld this information from her parents deliberately and successfully, until intensifying, unrelenting urinary symptoms compelled her to seek help, more than three years after execution of her singular adventure into the beguiling mysteries of genito-urinary physiology.

Subsequent observations by one of us* indicate that the young lady is conducting herself in a perfectly normal manner in her social and family relationships, and she is getting along well in school.

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Oral Treatment for Ringworm

An antibiotic which can be taken by mouth has been found to be effective in the treatment of ringworm, according to two Florida dermatologists. In a preliminary report in the March Archives of Dermatology, published by the American Medical Association, the doctors treated 31 patients with various types of ringworm with griseofulvin.

The drug is called griseofulvin for the species of Penicillium from which it is made. Pencillin is made from another species—notatum. Griseofulvin earlier was found effective against fungus infections in plants.

When griseofulvin was taken daily by mouth ringworm of the body and scalp cleared within one to three weeks. Onychomycosis (ringworm of the nails) cleared within three to four months.

This success suggests that "the systemic treatment of superficial fungus infections in man at last seems a near reality." There has been no standard treatment for fungus infections, but it has usually included keeping the area dry, and applying various chemicals.

Adverse side effects from griseofulvin appear to be minimal in man. However, animal experiments indicate that griseofulvin affects the blood and the doctors recommended that regular blood cell counts be made during prolonged use of the drug in humans.

The duration of treatment required for the various fungi varies, apparently depending on the time required for normal replacement of the infected tissues.

Fungus infections of various origin showed "a uniformly favorable response to oral therapy with griseofulvin." Even infections of 60 years duration responded. However, the chances of relapse or recurrence are still not known.

Drs. Harvey Blank and Frank J. Roth of the University of Miami School of Medicine, Miami, Fla., and the Veterans Administration Hospital, Coral Gables, Fla., were the authors.

"Physician Know Thy Schools"

JOHN S. MORRIS, Jr., M.D.
Lynchburg, Virginia

WHILE the public school system has never had so much to offer so many in the ways of health education, it has been appalling to find that many physicians know so little of the school system in their own communities.

Twenty per cent of the population in America today spend approximately half their waking hours in school. Physicians have sometimes been heard to be critical of the schools without thorough understanding of what they speak.

Any physician seeing children patients should know the answers to the following questions concerning the school health program in his own locality.

1. Do all pupils get annual physical examinations?
2. How often is the child's vision checked in school?
3. How often is the child's hearing checked in school?
4. What kind of a school lunch does the child eat? Is it a "sandwich type" or is it a well balanced meal?
5. Can the school force a child to take D.P.T. or polio immunizations to attend school?
6. On the average how many children are in each school room? Are classrooms overcrowded?

There are many similar questions, the answers to which all well informed physicians should know in their dealings with their young patients.

"The major purpose of a school health program is to maintain, improve, and promote the health of the school child. The program should include adequate supervision: of the physical, mental, emotional and social aspects of school life, as well as assistance in planning the course content and instruction in health, education, recreation and physical education."[1]

In the Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association,[2] school health services are defined as procedures established:

1. "To appraise the health status of pupils and school personnel.
2. To counsel pupils, parents, and others concerning appraisal findings.
3. To encourage the correction of remediable defects.
4. To assist in the identification and education of handicapped children.
5. To help prevent and control disease.
6. To provide emergency service for injury or sudden sickness."

THE ANNUAL SCHOOL PHYSICAL EXAMINATION

Much has been written about the superiority of the family physician or pediatrician examining the school child since he knows the family history and can do this far better than the school physician who by necessity has to do mass examinations. With these views I heartily agree. The family physician must assume a more active part in school health and primarily in the school health examination since it is through him that the proper balance between private medical enterprise and state regulation can be maintained.[3] However, until more private physicians are more active in educating families as to the value of "well-child" examinations, I feel the mass screening by the school physician still has a very definite place in the schools so long as the defects found are followed up and treated.

In 1950 a questionnaire by the A.M.A. revealed that 50% of such examinations were done by private physicians across the nation. In Philadelphia in 1954 less than 1.6% of one group of children were examined by their private physician and only .6% by their private dentist. Fischer states that in Pennsylvania in 1955 less than 3% of school health examinations were done privately in physicians offices.[4]

There has been a shift in recent years to the emphasis of a very good and thorough examination every three years rather than a more superficial one every year. This, indeed, has its points; however, in an organization that allows its annual examinations to become superficial, the triennial one will soon become superficial also.[5] Jacobziner of New York City recommends only two examinations during the elementary grades, one of newly admitted chil-

dren and another at the sixth grade.[6] He further strongly recommends two physical examinations during the high school years.

Those who oppose the idea of the mass examination state that before the children have been examined one can anticipate that in a group of 100 children, one will have a heart disorder, 20 will have visual disorders; 10 will have hearing impairments; 15 have nutritional defects; 10, growth problems; and 85 will have a dental disease.[7] Granted that this is probably so, the important object is finding *which* child has the particular problem and meeting with his family to urge its correction. Yankauer,[8] in his exhaustive study, found that "14% of the children examined in the second grade had new adverse conditions not present in the first grade examination. It is true that of these less than 4% had a condition for which he was not receiving medical care", but he states, "It is of interest to note in passing that all but one of the 9 children whose conditions were neither known nor under care might have been discovered by a simple screening inspection far less extensive than the 30 minute medical examination which was performed."

Nationally, at least one medical examination is required of each pupil while in school by 83% of all school systems, and 17% require from 8 to 14 annual examinations during their school life.[9]

Since so much in the recent literature has stressed the individual examination over the mass screening technique, it was felt that a survey to determine the actual number of children in the schools in Lynchburg who had been examined by their family doctors during the preceding year would be valuable in determining the need of continuing the annual examination. Schools were chosen to demonstrate a good cross section of the city on a socio-economic basis, and able, experienced nurses made the survey by interviewing each child. If a child had only received an immunization in the physician's office this was not counted as a visit. (See Table I)

It can be seen from this survey that a relatively few were seen by a physician in the lowest economic area and surprisingly, not a large number from the higher economic strata.

Children receive "check-ups" fairly regularly until they are 2 or 3 years of age and after that, in far too many cases, the pediatrician sees them only for an acute illness. In the writer's practice, it has been noted that "only" children are brought in for well-child routine examinations over a longer age span than children of large families. Many parents bring their children into the office just before school opens in the fall for "just a vaccination". Tactfully it is suggested that a fairly thorough "going over" is in order since on examination of the child's chart, it is often noted that he has not had a "well-child" examination for several years. However, too often the parents want only a vaccination since they cannot see the value of an examination of their well, healthy, and frisky youngster.

A growing family at present is a very costly undertaking, especially if plans are being made for future college educations. When a mother sees a child very active, eating well, full of life, and then analyzes the clothing bill and the enormous food bill, she frequently does not understand the value of and the necessity for routine examinations.

THE LYNCHBURG SCHOOL HEALTH PROGRAM

At this point let us consider the Lynchburg, Virginia, school system and its health services as a representative city of 50,000 population.

Upon the child's enrollment a health history is obtained from the parent by the teacher and all immunizations, etc., are entered on the child's health card. These cards are examined twice a year by the nurse and if there is any unusual condition noted that child is called to the attention of the doctor, not at the time of the mass survey, but at another time when the child can be examined individually. Each child is weighed every six weeks by the teacher. Every child's vision is examined each year by the school nurse using the Snelling eye chart.

Every child's hearing is tested each year in kindergarten, and in the first and second grades by a "whispering test". Any child showing an abnormality

Table No. 1

Survey of Children in Seven Schools in Lynchburg, Virginia, of Various Socio-Economic Levels who Had Been Examined by Their Family Physician Within the Past 12 Months

	Children Examined Within Past 12 Months by Family Physician	Total Number Children Interviewed in School	Per Cent Examined by Family Physician
School F.....	7 (grades 1-7)	200	3½%
School S.....	13 (grades 1-4)	253	5 %
School F H.....	111 (grades 1-7)	387	29 %
School M.....	30 (grades 3-6)	326	9 %
School W R.....	8 (grades 3-7)	191	4 %
School G R.....	44 (grades 3-7)	284	15½%
School B.....	8 (grades 3-7)	248	3 %

here is fu ther checked by the nurse using an individual audiometer test. Any defects are referred to the family physician. Every child is examined in a group audiometer test in the third, fifth and seventh grades.

Each child in the elementary grades is seen three times a year, once by the school physician and twice by the nurse. The school physician spends 1½ hours of each school day of the school year in these examinations. These examinations, of course, are not as thorough as the 30 or 40 minute examinations that Yankauer describes in a study in Rochester[8] or of the 15 minutes required by Pennsylvania law.[10] In Lynchburg, in the school year 1957-58, of the 7,193 elementary children examined, 2,438 or 33% were found to have defects that would hinder the child from attaining his maximum learning capacity. Of these 2,438 children with defects, there were 2,552 defects found (several having multiple defects). In the annual follow-up survey it was noted that of the 2,552 defects found, 2,390 had been treated, a "treatment ratio" of 93%. ("Treated" simply means the family physician or dentist was consulted.) See Table No. 2. This compares favorably with 30% reported treated in Philadelphia.[11] a school nurse visits every home of a child discovered to have a defect and talks with one or both of the parents.

In addition to the 2,234 home visits the nurses made during the year, they went into the classrooms a total of 1,724 times to give talks on health to supplement the teachers' instruction. Health in Virginia is taught throughout the grades from kindergarten through the senior year of high school in classes geared to the pupil's increasing ability to understand. The Virginia State Department of Education specifies that a certain amount of classroom time in the different grades be devoted to the study of personal hygiene and nutrition. Text books are selected locally by a committee of teachers after extensive review.

The control of contagious diseases and first aid was of prime importance back in the early days of school health service. In the past school year (1957-58) first aid was rendered by the nurses 1,607 different times. Of the total of 9,512 students only 14 children were excluded by the nurses because of a contagious disease (not counting Tinea Capitis). Today, most contagious diseases are handled by the teachers. The nurses instruct the teachers in this area and all teachers are issued the Government pamphlet "What Every Teacher Should Know about the Physical Condition of Her Pupils."[12]

Table No. 2

Summary of the School Examinations in Lynchburg, Virginia, and the Follow-Up Results for the School Year 1957-58

Item	Total Number
Children Examined (elementary only)	7193
Number of children found with defects:	
Found	2438
Treated	2363
Number of defects:	
Found	2552
Treated	2390
Eyes:	
Found through school examinations	197
Found otherwise	28
Number given glasses	225
Ears:	
Hearing deficiency examinations	81
Examined by otologist	63
Diseased tonsils and adenoids:	
Found	132
Tonsils and adenoids removed	92
Children with diseased teeth (temporary and permanent):	
Found	3142
Seen and treated by dentist	2107
Skin and scalp diseases (not including tinea capitis):	
Found	10
Treated	10
Hearts (murmurs):	
Found	28
Referred to family physician	16

It is of interest to note here the New Haven Board of Health in 1950 officially stated,[7] "Measles, German measles, mumps and chicken pox must be allowed to occur in childhood rather than attempt prevention with the alternative of having them contracted in adolescence or adulthood. These diseases have no preventatives and adolescents and adults are being attacked in greater numbers and with greater severity. Therefore, many health authorities do not deem it advisable to exclude from school contacts of these diseases." Lynchburg still attempts to exclude all contagious diseases from its schools, but one must recognize the medical wisdom of the New Haven action.

THE COST OF THE MEDICAL SERVICES IN LYNCHBURG SCHOOLS

The costs to the tax payer for these medical and dental services are listed in Table 3. The total of

Table No. 3

Cost of the Health Services of the Lynchburg, Virginia, School System, School Year 1957-58

Total number children in public schools	9,512
Salary and transportation of nurses—3 full time and 1 part time (Head nurse is half time, probation officer)	$12,154
School physician	2,250
School psychologist*	150
Total	$14,454
Approximate costs per child (less dental expense)	$1.52
School dentists (treatment of indigents only)	$5,590

*Consultation service in cooperation with the Psychology Department of a local college.

$14,454 divided among 9,512 students is not great considering that for each $1.52 expended per pupil that pupil received:

1. A physical examination by the school physician.
2. Two inspections by the nurse.
3. An average of six health talks by the nurse.
4. An examination of visual acuity.
5. An examination of hearing acuity.
6. A demonstration each year by the nurse on the correct way to brush teeth.

As will be noted in Table 3, 25% of the budget is for dental service. This is for actual dental treatment of the indigent child. This service is given those children who could not otherwise afford dental care. Table 4 is a break-down of this work.

Table No. 4

Work Performed by the Dental Clinics for Indigent School Children, Lynchburg, Virginia, School Year 1957-58

White Schools		
Dental work completed (number of children)		118
Amalgum filling	1149	
Cement filling	4	
Porcelain filling	110	
Cement base	840	
Extractions (temporary and permanent teeth)	192	
Nerves capped	119	
(Total white elementary school enrollment—4,411)		
Colored Schools		
Dental work completed (number of Children)		139
Amalgum filling	808	
Cement filling	165	
Porcelain filling	58	
Extractions (temporary and permanent teeth)	264	
Treatments	113	
Teeth cleaned	37	
Nerves capped	337	
(Total colored elementary school enrollment—1,734)		

A white dentist works two full afternoons each week of the school year in the white clinic and a colored dentist works two full afternoons each week of the school year in the colored clinic. Only elementary school children attend the dental clinic.

IMMUNIZATIONS

Virginia law requires the school child to be vaccinated against smallpox every five years. No other immunization is required. However, D.P.T. and polio are strongly urged by the schools. In Lynchburg the City Health Department nurses hold immunization clinics in each of the schools once a year and give smallpox, D.P.T. and polio immunizations to all children whose parents have given written permission.

PSYCHOLOGY SERVICES

Lynchburg is fortunate in having the professor of psychology of one of our local colleges act as a consultant and perform special tests on selected children in our system. Advanced college students under the professor's direct supervision do some of the testing. Only problem children and a few children selected by the principals for special study can be so tested. Approximately one half day a week is devoted to this. It is hoped that in the future Lynchburg might have a full time psychologist.

SPEECH AND HEARING SERVICES

A position for a speech therapist has been created and the salary appropriated but to date no qualified person has been obtained.

THE CONTROL OF AN EPIDEMIC OF TINEA CAPITIS

In the spring of 1957 an increasingly large number of cases of tinea capitis was noted among school children. These were predominantly in the Negro children which was contrary to the Hagerstown, Maryland,[13] epidemic of 1945 which was predominantly white. After a conference between school authorities and the City Health Department a Woods Light was purchased and a campaign for the eradication of this plague was begun. Every elementary child in the school system was examined. Since this condition usually disappears with puberty, the high schools were not examined. It should be borne in mind that this examination had to be done in complete darkness, not an easy job to do in some schools. Of the 7,300 children examined, 172 were found to have tinea capitis. A meeting was called of all parents of the affected children and the entire problem was discussed by the Director of the Department of Health. The parents saw the conditions demonstrated under the Woods Light and asked any questions that they wished. The treatment was discussed and each parent was given a printed sheet of instructions. The Health Department set up extra

dermatology clinics to handle these cases and supplied the medication. The majority of the infected children were indigent so they were treated through the local health department out patient clinic. The colored school nurse worked during part of the summer rounding these children up and referring them into the clinic. The school board passed a ruling that no child would be allowed in school with the disease unless his head was shaved and he wore the prescribed cap. When school opened September, 1958, nine months later, all children had been completely cleared except nine who had to return wearing the cap and continue treatment. Only four were not allowed in school. These four were from families who were completely uncooperative. At present, the colored children have to be examined by the Woods Light twice a year; an additional burden on the overworked school nurses.

The writer feels the work performed by the school nurses in the tinea capitis program alone deserves a great deal of credit.

THE SCHOOL LUNCH PROGRAM

The school lunch program in Virginia has evolved greatly in the past 20 years. To obtain federal aid, in monetary as well as surplus farm products, the school has to comply with the minimum standards set forth by the Bureau of Human Nutrition and Home Economics, U. S. Department of Agriculture.[14] The term "lunch" is a misnomer. It is a complete meal planned to meet one-third of a pupil's daily food needs. The primary grade child is given smaller amounts; the upper grade child larger portions. The meal includes:

1/2 pint whole milk.

2 ounces of meat, fish, poultry, cheese; or 1/2 cup cooked dry peas, bean or soybeans; or 1/4 cup peanut butter; or 1 egg.

3/4 cup vegetables or fruit, raw or cooked.

1 portion bread, muffins, or hot breads made of whole grain or enriched flour.

2 teaspoons of butter or fortified margarine.

The food is served hot and the milk chilled. If your young patient is eating the "school lunch" rest assured he is getting at least one good well balanced meal a day. This lunch was available to pupils for only $.25 per day in Lynchburg for the school year 1957-58.

THE SCHOOL BUILDINGS FOR HEALTHY LEARNING

Another point of the health program is the proper construction of new schools. Much space in the joint committee's report[15] is devoted to the proper design of a modern school as to ventilation, lighting, toilet facilities, etc. In the State of Virginia the legislature in 1954 passed a law requiring all school buildings in Virginia to conform to "The School Planning Manual" drawn up by the School Building Service of the State of Virginia. The manual was revised in 1957. This work has been so successful that many states are in the process of copying parts of it and it has been studied in many foreign lands. It specifies that no school should have less than four acres of land plus 1 acre for each 100 pupils. This, of course, insures adequate play and healthful recreational facilities for the students.

Many aspects of construction such as toilet facilities are "spelled out". Each school has to have 1 commode per 30 girls, 1 commode per 60 boys, 1 urinal per 30 boys and 1 lavatory per each 50 boys and girls.

Adequate lighting has to be specified in the plans before the plans are put out to bid. The ventilation in order to be adequate, must change 100% of the air three times an hour. The cafeteria has to have a certain number of square feet per child. The number of drinking fountains is specified per 100 pupils. Also the heights of the fountains from the floor are definitely specified.

A clinic of specified size with running water has to be incorporated in each new school building. All of these requirements and many more have to be met in the plans and specifications of each new school in Virginia. The plans are then carefully reviewed by the architects of the State Board of Education and have to be passed by them before the building can be put out to bid. Virginia should be proud of this law.

SUMMARY

1. Physicians seeing children patients should acquaint themselves with their local school health program to better understand their patients' problems.
2. The aims of school health services are summarized.
3. The annual school physical examination is discussed with a study of the number of Lynchburg school children who are seen annually by their family physician. The number is too small.
4. The Lynchburg School Health program is presented.
   A. Frequency of examinations

B. Cost of health services

C. Indigent dental program

D. Control of an epidemic of tinea capitis in Lynchburg schools

E. School lunch program

5. Virginia law regulating building construction to guarantee healthful school living is discussed.

BIBLIOGRAPHY

1. Report of the Committee on School Health, American Academy of Pediatrics. Pediatrics 13: 1, page 74, Jan., 1954.
2. Wilson, Charles C.: School Health Services, National Education Association 1953, Foreword.
3. Maclachlan, Kenneth L.: School Health and The Family Physician. New England J. M. 253: 767-768, Nov. 3, 1955.
4. Fischer Carl C.: The Role of the Private Physician in School Health. The Pennsylvania M. J. 59: 9, 1063, Sept., 1956.
5. Van Kleek, Edwin R.: The Medical Examination in School Health Service. Connecticut M. J. 16:851, July, 1952.
6. Jacobziner, Harold: Health Services for the School-Age Child—A New Approach. J.A.M.A. 165: Nov. 1957.
7. Shaffer, Thomas E.: School Health Is a Community Undertaking. Ohio State M. J. 53: 5, May, 1957.
8. Yankauer, Alfred: A Study of Periodic School Medical Examinations. A. J. Public Health 46: 1553, Dec., 1956.
9. Kilander, H. F.: Health Services in City Schools—Administrative Aspects. A. J. Public Health 43:321, Mar. 1953.
10. Wilson, Charles C.: School Health Services, National Education Association 1953, page 40.
11. Lesser, Arthur J.: Changing Emphasis in School Health Programs. Children Jan.-Feb. 1958, Page 12.
12. What Every Teacher Should Know about the Physical Condition of Her Pupils. U. S. Dept., Health, Education, and Welfare, Pamphlet, No. 68, Reprint 1955, U. S. Govt. Printing Office.
13. Schwartz, L.: Control of Ringworm of Scalp Among School Children in Hagerstown, Maryland. J.A.M.A. 132:58-62, Sept. 1946.
14. Wilson, Charles C.: Healthful School Living, National Education Association, Washington, D.C. 1957, page 118.
15. Wilson, Charles C.: Healthful School Living, National Education Association, Washington, D.C. 1957, page 139.

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Do Not Ignore Changes in Moles

Moles, "the commonest of all tumors" seldom cause trouble, but one kind needs careful watching because it may produce "the most malignant of all cancer."

This type is junction nevus. It is described in the February Today's Health, published by the American Medical Association.

Some moles may contain certain cells, called "nevus cells" which may predispose to the development of cancer. A mole with these cells is called "junction" because it rises at the junction of the first and second layers of the skin.

Common moles practically never become malignant. Moles that turn cancerous almost invariably get their start in junction nevi.

Most junction nevi never turn cancerous either, but they may occasionally do so. If there are changes in a mole—deepening in color, increase in size, or noticeably heightened sensitivity—a doctor should be consulted. If he finds the mole to be a junction nevus, then he should remove it—before it has a chance to become malignant.

"The odds are very much against every human being, even the most freckled, having a junction nevus. Hence the anxious examination of one's moles is no more to be encouraged than the hourly taking of one's pulse if all else is well. But the grave risk of ignoring any changes in the elevation, shape or color of a mole is not to be encouraged either. Let a physician and his laboratory decide. It might be a junction nevus."

The article was written by James C. G. Conniff, Upper Montclair, N.J.

Mental Health . . . .

EDNA M. LANTZ

Our Hospital Patients Grow Older

The admission of patients 65 years of age and over has shown a rising trend for the past 10 years in Virginia State Mental Hospitals. Diseases of the senium compose about 80% of these admissions. The remaining 20% are functional diseases or other chronic brain syndromes. Both first admissions and readmissions have played a part in this increasing trend of the older patients. This diagnostic group remain only a short period of time because the death rate is high. There are a few discharges for other reasons but the separation from the hospital of those suffering from disease of the senium is usually by death.

Using 1949 as a base of 100 for the index of first admissions, the rate of increase of first admissions of elderly patients has been larger than the increase in other first admissions. This was also true for those admitted with a diagnosis of diseases of the senium (except for 1958 which had a slight drop).

The following tables show the rate of increase in the first admissions.

The functional psychosis group (schizophrenic, manic-depressive and involutional) comprise less than 5% of the admissions, in the 65 years of age and over group so they are not a large part of the admission problem, however, they do become older in the hospitals—as brought out in the previous article.

Although the readmissions of the 65 years of age and over are about 20% of the total admissions in this group, the following table, using 1949 as 100 for the index base shows the increasing trend in this group also, although the readmission rate of this group is not as great as the total readmission rate.

Although the change in percentage of the 65 years of age and over to the total admissions has varied only slightly, the increase in number of patients involved in this age group has placed a burden on both the physical facilities and hospital personnel, since this type of patient requires more equipment and nursing care. Except for one hospital there has been no increase in facilities for the proper housing of the geriatric patient. Overcrowding is general. Such patients need more personal attention by physicians, nurses and attendants. Because of their age, many are physically incapacitated. They are more prone to accident, such as falling, which means more careful nursing aid in their moving about. Many need individual spoon feeding.

There has been a slight increase in the discharges other than by death of patients in the 65 years of age and over in the past few years. This is also true for those diagnosed as disease of the senium. Even so, about 80% of the separations from the hospital in this group is by death. Since the total discharges and deaths 65 years of age and over group include those that have grown old in the hospitals (functional psychosis patients), therefore, the discharge and death index are shown for those diagnosed as diseases of the senium 65 years and over.

The following table shows the index of the dis-

First Admissions

Year	Total Admissions	Index	65 Years of Age and Over	Index	Diseases of Senium 65 Yrs. and Older	Index	Percent of Admissions 65 Yrs. & over each Year
1949	2049	100.0	482	100.0	428	100.0	23.5
1950	2081	101.6	519	107.7	470	109.8	24.9
1951	1796	87.7	498	103.3	435	101.6	27.7
1952	1969	96.1	546	113.3	471	110.0	27.7
1953	2134	104.1	584	121.2	525	122.7	27.4
1954	2165	105.7	519	107.7	465	108.6	24.0
1955	2276	111.1	629	130.5	566	132.2	27.6
1956	2298	112.2	564	117.0	495	115.7	25.0
1957	2467	120.4	627	130.1	548	128.0	25.4
1958	2791	136.2	673	139.6	539	125.9	24.1

Lantz, Edna M., *Statistician, Department of Mental Hygiene and Hospitals, Richmond, Virginia.*

Approved for publication by Commissioner, Department of Mental Hygiene and Hospitals.

READMISSIONS

Year	Total Readmissions	Index	Readmission 65 Years of Age and Over	Index	Readmission Diseases of Senium -65 Yrs. and over	Index	Percent Readmissions -65 Years and Over
1949	1166	100.0	137	100.0	76	100.0	11.8
1950	1129	96.8	131	95.6	80	105.3	11.6
1951	1127	96.7	132	96.3	78	102.6	11.7
1952	1297	111.2	136	99.3	83	109.2	10.5
1953	1310	112.3	139	101.5	72	94.7	10.6
1954	1352	116.0	149	108.8	90	118.4	11.0
1955	1510	129.5	164	119.7	104	136.8	10.9
1956	1513	129.8	188	132.7	119	156.6	12.4
1957	1649	141.4	176	128.5	106	139.5	10.7
1958	1834	157.7	182	132.8	100	131.8	10.0

charge and death rate using 1949 as a base of 100:

By comparison of alive discharges with admissions the turnover rate of the diseases of the senium is very small—about 5%. The death turnover rate to admissions is high, about 95%. Many of these die in the first few months of hospitalization. The average hospital stay of all deaths in the "disease of the senium" group is less than 2 years.

The aged in the general population has increased in the last few years. Estimates are that it will continue to increase. As this increase develops the expectation is that admission of the aged to mental hospitals will increase.

	DISCHARGES				DEATHS			
Year	Total	Index	Diseases of Senium 65 Years and Over	Index	Total	Index	Diseases of Senium 65 Years and Over	Index
1949	2015	100.0	85	100.0	801	100.0	385	100.0
1950	2030	100.7	89	95.5	931	116.2	460	119.5
1951	2296	113.9	77	90.6	852	106.4	405	105.2
1952	2198	109.1	94	110.6	943	117.7	482	125.2
1953	2165	107.4	82	96.5	874	109.1	429	111.4
1954	2208	109.6	89	104.7	786	98.1	416	108.1
1955	2290	113.6	107	125.9	813	101.5	301	78.2
1956	2852	141.5	131	154.1	1,024	127.8	558	144.9
1957	2890	143.4	102	120.0	1,017	127.0	523	135.8
1958	3227	160.1	132	155.3	1,088	135.8	596	154.8

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

Rising Costs or Waste?

ALBERT V. WHITEHALL
New York, New York

A few months ago a thoughtful insurance executive[1] asked this question: "Who really wants to contain the rising cost of hospital and medical care?" Then he examined the incentives that might be expected to motivate five important groups most interested in this question of rising health care costs.

Do doctors wish to curtail their practice or their income?

Would hospitals willingly curtail the quality of hospital service?

Must insurers halt rising costs and thus diminish their volume of business?

Do labor unions, whose members generally receive health care at their employer's expense, desire to have these benefits restricted?

Do employers themselves wish to take responsibility for curtailing health benefits for employees and their dependents?

All these groups say costs should be cut—but by someone else! Meanwhile, health care costs continue to rise, and the public becomes increasingly uneasy.

Is cheaper care really the issue? The President of the Health Information Foundation[2] recently observed:

> "It seems obvious that the American Public, increasingly aware of the value of good medical care, is willing to pay for it. Certainly, it has reason to be. . . .
>
> "In the past, it's true, pain, disability, and serious illness could be faced at relatively little expense—simply because there was relatively little that could be done for a sick person. Now pain and disability can often be avoided and death greatly postponed—but at the cost of more visits to physicians, more admissions to hospitals, more use of drugs and other treatments.
>
> "Seen in this light, recent increases in spending for medical care do not seem excessive. In fact, many authorities believe that we do not yet spend enough for health items."

It appears that the American people are willing to pay for good care; through health insurance, most of us are increasingly able to pay for better care. Why then the clamor about rising costs?

Perhaps the real reason for the public's concern over rising costs is a lurking suspicion that our voluntary system is vulnerable to abuse, waste, or inefficiency. In almost every discussion of rising costs, there is this undercurrent of suspicion.

Suspicion, of course, thrives on lack of information. Are we telling the American people all they need to know about medical costs—and prices?

There is less mystery on the therapeutic side of medicine than there used to be; today's patients are more sophisticated about wonder drugs, miraculous surgery, and dependable day-to-day medical advice. This knowledgeable demand for high quality is a potent force toward improving quality.

But isn't there too much secrecy about medical economics? Why are doctors so often reluctant to itemize their bills? Why is it so difficult to get full information from some hospitals as to the exact services and supplies furnished? Is such detailed information "bad for the patient to know" or "none of his business"? Would that patient pay any other indebtedness on such meagre explanation? Further, in the absence of readily available criteria by which the patient may judge for himself what he should have been charged, he is dangerously apt to suspect that the doctor's fee is set subjectively, shrewdly, or even greedily.

The general public, purchasing health insurance, has been given very little guidance by the medical profession in determining how much protection to buy. Is this one reason people buy several coverages? Insurance companies try to have their indemnity schedules bear some relation to the actual fees charged by doctors; but any given doctor can make the schedule look like a grab-bag selection of miscellaneous figures. What does this do to the general public, prone to suspect the worst anyway?

(*Editor's Note:* Mr. Whitehall is Vice-Chairman of the Health Insurance Council, an organization established by the insurance industry to provide a central source of information and technical and practical counsel regarding health insurance coverages to groups concerned with health services.)

Suspicions about doctors' fees would have less to grow on if the usual or customary fees of doctors in the community were a matter of public knowledge. Patients are as reticent as doctors to discuss fees even where doctors post notices in their waiting rooms inviting them to do so. Perhaps some overt step by the profession would help to break down this barrier to mutual confidence. Public approval of our voluntary system is essential to its preservation. The public generally has great faith in the medical profession, but it would be dangerous to take this for granted.

Suspicions are further fed by the rare but dramatic incidents where abuse does creep in. Yet, an insurance claims executive[3] recently said:

> "One of the most dangerous things we could do would be to anesthetize ourselves with the thought that the price problem we face is simply the result of patient abuse and doctor and hospital greed. . . . We will not come to grips with the problem until we look deeper. Along with the improvement in our standard of living, there has come a demand for more and better medical care. Even if we were so disposed, we could not turn back this demand. What we must do is to find a way of satisfying the demand at a cost the public considers justified."

Nobody really wants to cut health care costs. But the public is alarmed about spiraling costs, which, of course, are reflected in health insurance premiums. Much of this alarm is really suspicion, fed by ignorance, that perhaps health care dollars may be wasted by abuse or inefficiency.

We say that higher costs mean better care, not waste. But it is not enough to say it; we have to prove it. And that means giving the public—our patients and policyholders—more facts. Mystery no longer has a proper place in medicine.

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(1) Stefan Hansel, Vice President, Great-West Life Assurance Co., Canada, to Council on Employee Benefit Plans, New York, October 17, 1958.

(2) George Bugbee, "Progress in Health Services", December, 1958.

(3) Kenneth Barrows, Claims Secretary, Bankers Life Company, Iowa, to Southeastern Regional Conference, Health Insurance Council, January 27, 1959.

Safety Closures for Drug Containers

Widespread use of safety closures for drug containers is advocated by a North Carolina pediatrician. Dr. Jay M. Arena, Durham, feels that the adoption of safety closures for all drug containers in common home use could reduce the number of cases of accidental, experimental, and innocent ingestion of potentially poisonous drugs.

His observations are reported in the March 14 Journal of the American Medical Association, following a study of 1,600 homes with children under five years of age.

Accidental ingestion of drugs causes 35 per cent of deaths from poisoning of children in the one to five age group. Incidence of poisoning from drugs is much greater than from household agents.

"There is little wonder that poisoning is so frequent in infants and children who learn by exploration, questioning, sampling, and trial and error. They are particularly suspectible to the accidental ingestion of brightly colored attractively shaped and packaged, sugar-coated drugs of all kinds."

To overcome this problem, Dr. Arena believes that all available safety measures and precautions should be utilized. Education alone is not enough. "Precautionary labeling and safety closures are good measures . . . in the prevention of these tragic accidents."

Purpose of the study was to test three closures—two of the safety cap variety and one conventional screw cap—to determine which would be the most effective in reducing the chance of small children gaining access to drug containers. It was also necessary for these safety caps to be designed and constructed so that mothers could remove and replace them with a reasonable amount of ease and convenience.

As a result of the study, Dr. Arena favors the use of a plastic, snap-on type cap. This closure proved to be the most difficult for children to remove and the easiest for them to replace. The ability of easy replacement is valuable since it implies that older inquisitive chidren can prevent younger infants from gaining access to containers. In addition, this cap was voted by mothers as the one in which they felt was the easiest to securely replace. This is significant since a loose cap means an open container.

Dr. Arena is affiliated with the department of pediatrics, Duke University Medical Center.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Poliomyelitis in Virginia, 1958

Poliomyelitis is unpredictable as to where it will strike, who it will strike, with what severity, or in what numbers. Its occurrence in 1958 followed this pattern. The year 1957 had been the year of lowest incidence, 107 cases, and hopes had been high that 1958 would be lower. An outbreak in the three counties of the southwestern tip of Virginia, Lee, Wise, and Scott, and another in Rockingham County caused anxiety in these areas and destroyed every idea that a record of low incidence would be established. The disease prevailed chiefly in the substandard socio-economic group in this State as it did elsewhere in this country. The age groups that were hardest hit were under 1 and 1-4 years. In past years incidence had been low among Negroes but had increased in this race during the last two or three years. In 1958, however, the number involved was small but it is probable that this was due to the low percent of Negroes in the populations of both epidemic areas. In 1958 there was a relatively high percentage of paralytic cases throughout the United States due, no doubt, to more accurate diagnoses before reporting cases and to a reluctance to report nonparalytic disease without laboratory confirmation.

The total number of cases of poliomyelitis reported in Virginia in 1958 was 159. These were divided: Paralytic, including 28 bulbar cases, 139; Nonparalytic, including unspecified, 20. Table I shows the distribution by severity (death, paralytic, and nonparalytic) by age group and number of injections of Salk vaccine.

The first case of poliomyelitis for the year was reported from Pulaski County early in February. It was a bulbar case in a white male, 13 years of age, who had received only one dose of Salk vaccine a year before the onset of his illness. He recovered. This was the only case that developed in Pulaski County in 1958. There were two cases reported in April, one from Norfolk County and one from Roanoke County. The fourth case of the year was reported from Lee County at the end of May. At the corresponding time in 1957 there had been 14 cases in the State. The patient, a native of a mining camp near the border of Wise County, was the first of 8 cases that developed in Lee County. The onset of these cases was one in each of the following weeks: 21st, 22nd, 23rd, 24th, 26th, 27th, 35th, 38th, and 41st. Three of the 8 cases had received 1 dose of Salk vaccine, one of them only a short time before onset of illness. None of them had been given second or third doses.

A month after the appearance of the first case in Lee County, the first case of 1958 in Wise County

TABLE I
POLIOMYELITIS IN VIRGINIA, 1958, BY COLOR, SEVERITY, AGE GROUP AND DOSES OF VACCINE

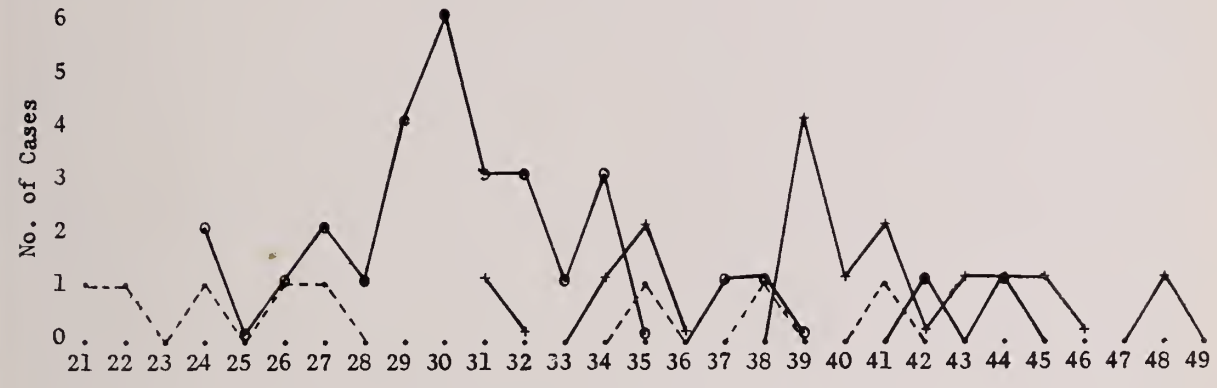
	PARALYTIC — 139 (includes 28 Bulbar cases)								NONPARALYTIC — 20							
	WHITE				COLORED				WHITE				COLORED			
Age group	No.	Doses of vaccine			No.	Doses vaccine			No.	doses vaccine			No.	doses vaccine		
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
0-4	**39	4	*8		10	1			4	5	1	1			1	
5-9	*23	*4	4	*3	4	1			3	2						
10-14	2	5	*1	*4	1		2		1							
15-19	3			*2	1				1		1					
20-24	5		1		1											
25-34	2	1		1												
35-44	***4				1											
45 +	*1															
TOTAL	79	14	14	10	18	2	2		9	7	2	1			1	

Each * represents 1 fatality.

was reported. During the week, the 24th, two cases were seen. There were no cases in the 25th week. One had onset during the 26th week, 2 during the 27th, 1 in the 28th, 4 in the 29th, and the peak, 6 cases, was reached during the 30th week, which ended July 26th. After this the cases were 3, 3, 1, 3, and down to 0 during the 35th week. Since the week ending September 6, there have been only 4 scattered cases.

Though Rockingham County is remote from Scott County, the pattern of distribution of cases was similar in the two counties. The first case in Rockingham County had its drop to zero after the 43rd week with only two cases reported since, one during the 48th week and the last during the 51st week. There were 21 cases in Rockingham County. One death was reported in this group. The distribu-

Figure I



Number of Cases in Lee, Wise, and Scott Counties, 1958, by week of onset

•—• Lee County
o—o Wise County
+—+ Scott County

The total number of cases in Wise County was thirty. Twelve of these had received 1 dose of Salk vaccine and 9 of the 12 had been inoculated only a few weeks prior to onset; one had been given 2 doses of polio vaccine; none had had the complete series of 3 doses. There were 3 deaths in the Wise County epidemic.

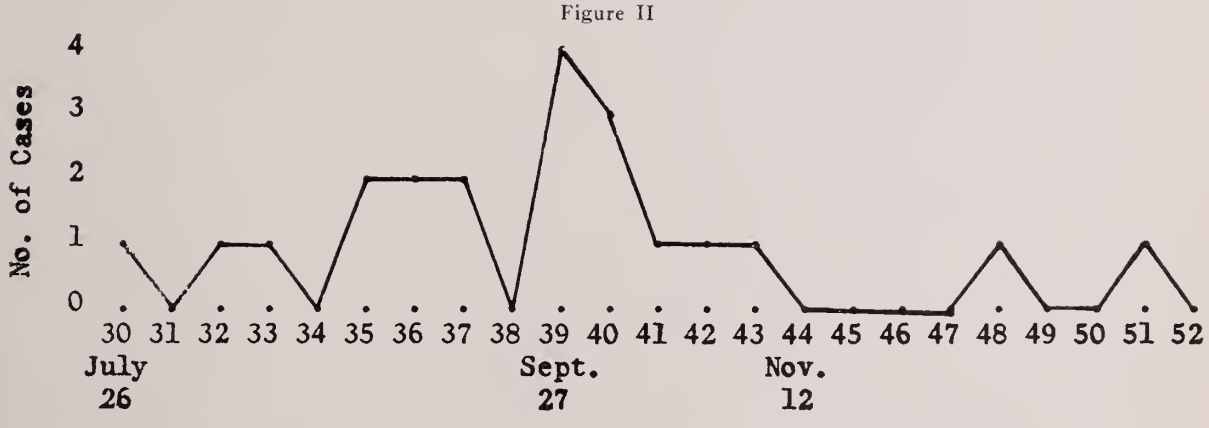
The onset of poliomyelitis in Scott County was the last during the 48th week with a total of 15 cases. The peak in this county was reached during the 39th week when 4 cases developed. There were 3 deaths among the Scott County cases.

tion of Salk vaccine among these cases was 4 with 1 dose, 2 with 2 doses, and 1 with 3 doses.

Figure II shows the number of cases by week of onset in Rockingham County

There is increasing evidence that the vaccine is efficient in preventing paralytic polio and that increased protection is afforded with each dose of the series of three. Routine surveillance of vaccine safety is maintained by the Poliomyelitis Surveillance Unit of the Public Health Service. Since May 1955 a total of more than 298 million doses of vaccine have been used without evidence of break in vaccine

Figure II



Number of Cases in Rockingham County, 1958, by week of onset.

safety. The only vaccine that has been available in the State without cost to the patient has been supplied by Federal funds through the Public Health Service, by the National Foundation, and by certain local groups. Though funds for the purchase of polio vaccine for use among Virginia's medically indigent had been requested in the budget submitted by the State Department of Health to the General Assembly of 1958, none were granted.

In the United States it is estimated that 53% of the population under 40 years of age has not had the three basic inoculations of polio vaccine and more than one-third has had no vaccine at all. Only 9 millions of the 20 millions under 5 years of age have completed their courses of vaccination. What is true for the country is also true for Virginia and it is probable that even fewer in this State have received their basic inoculations. Virginia has the dubious distinction of being among the six States most seriously affected with polio in 1958.

Both Wise and Rockingham Counties had received and used their proportion of the vaccine supplied through Federal funds and had also administered vaccine from other sources. The private physicians of the two counties likewise had given polio vaccine in their practice. When the outbreak appeared in Wise County, the Director of Public Health begged and borrowed all of the vaccine that he could get; the National Foundation, though they no longer supply vaccine, and the County Board of Supervisors made available sufficient vaccine to give first doses to all who applied. Two thousand, eight hundred and eighty-eight persons were inoculated on the first round and 33 had their second doses and 135 finished their 3rd doses during the initial clinics. With the exhaustion of all local sources of supply, the Director appealed to the State Health Commissioner for vaccine to give the second and third doses that would be needed. The Commissioner transmitted this appeal to the Governor who immediately authorized the purchase of sufficient polio vaccine to complete the job in Wise County. In spite of the publicity for the need to complete the series of three doses, 568 of the 2,888 failed to report back for their second doses. Third doses are not due until the spring.

The same situation prevailed in Rockingham County. They entered 1958 with 900 doses that had been provided in 1957 by the National Foundation. In March of 1958 this organization gave another 900 doses which lasted until late April or early May. Then the Health Department had to turn away hundreds of children because there was no vaccine to give them. In late July and August the National Foundation supplied an additional 900 doses and vaccinations were resumed. The Commissioner again went to the Governor and he promptly authorized the purchase of vaccine for Rockingham County. The State Department of Health sent 1,800 doses and assured the Rockingham County Health Department that vaccine to complete the series of three doses will be available for persons who started their immunizations during this period.

In the summer of 1956 there was a mild outbreak of polio in Dickenson County, which adjoins Wise County on the east. Much vaccine was given at that time. The results of the use of the vaccine were seen in 1958 when only two cases of polio were reported from Dickenson County. This emphasizes the value of polio vaccine when it is given in complete series at properly spaced intervals. The polio season of 1959 should be anticipated now and all persons under 40 years of age who have not been immunized should make arrangements through their private physicians to be inoculated. It is with extreme regret that the State Department of Health, through lack of appropriation for the purchase of vaccine, cannot supply Local Health Departments with polio vaccine for the medically indigent of their areas.

Monthly Report of Bureau of Communicable Disease Control

	Mar. 1959	Mar. 1958	Jan.-Mar. 1959	Jan.-Mar. 1958
Brucellosis	2	1	6	2
Diphtheria	0	4	2	9
Hepatitis	23	32	135	88
Measles	2543	3709	5423	5250
Meningococcal Infections	13	11	31	30
Meningitis (Other)	26	26	61	61
Poliomyelitis	0	0	1	1
Rabies (In Animals)	19	41	50	123
Rocky Mt. Spotted Fever	1	0	2	0
Streptococcal Infections	1351	1102	3470	2388
Tularemia	1	0	6	18
Typhoid Fever	3	2	5	7

The Medical Society of Virginia . . . .

Council Minutes

The mid-winter meeting of Council of The Medical Society of Virginia was called to order by Dr. Walter P. Adams, President, at 1:00 P.M. on Thursday, March 5, 1959, at Society Headquarters. Attending were Dr. Walter P. Adams, Dr. Allen Barker, Dr. Harry C. Bates, Jr., Dr. Guy W. Horsley, Dr. John T. T. Hundley, Dr. Harry J. Warthen, Dr. Mack I. Shanholtz, Dr. Paul Hogg, Dr. K. K. Wallace, Dr. Benjamin W. Rawles, Jr., Dr. Fletcher J. Wright, Jr., Dr. Louis P. Bailey, Dr. Alexander McCausland, Dr. Harold W. Miller, Dr. Byrd S. Leavell and Dr. Richard E. Palmer. Also in attendance were Dr. Vincent W. Archer and Dr. W. Linwood Ball, Delegates to the American Medical Association, and Mr. Robert C. Duval, Jr., Attorney for the Society.

Dr. Adams opened the meeting by briefly reviewing events leading up to the question of whether or not the Society should conduct another poll on social security coverage for physicians. The question was raised as to whether or not the Society's Delegates to the AMA should be given instructions on the matter before the June meeting of AMA in Atlantic City. This was not considered necessary.

Dr. Ball advised Council concerning the position of AMA on social security for physicians and stated that a recent impartial survey indicated that nearly 80 per cent of the physicians in the nation are not familiar with basic facts surrounding social security.

It was then mentioned that there appeared every likelihood the Keogh-Simpson bills would be passed during the current session of the Congress. The feeling prevailed that, if this should happen, there would be a lessening of pressure for compulsory coverage of physicians under social security.

The President then introduced Dr. George Craddock, Dr. Holcombe H. Hurt, and Dr. Charles Whitmore, who commented on the proposed social security poll of the Lynchburg Academy of Medicine. Dr. Whitmore described the proposed poll in some detail and stated that should The Medical Society of Virginia decide to conduct a poll, the Academy would gladly step aside. He stated that the Academy also wished to proceed through channels and the results of its poll would be submitted to the Society's House of Delegates for such action as it believed advisable.

During the ensuing discussion, it was pointed out that the House of Delegates had, in October, rejected a suggestion for an educational campaign and subsequent poll of the membership. The Council did not feel it would be justified in taking any action contrary to the decision of the House. Dr. Wallace then moved that the Council oppose a social security poll by the State Society at this time. It was then suggested that the motion be amended to point out that this opposition is based on the action of the House of Delegates in October and should not be construed as opposition to a poll conducted by a component society. The motion, as amended, was adopted.

Considered next were six suggestions submitted by Dr. Fletcher Woodward, Charlottesville, concerning traffic safety. They had to do with such matters as reporting all deaths to the Commissioner of Motor Vehicles, reporting to the Commissioner the names of patients with mental disease, etc., the listing of blood types on driving permits, the assignment of responsibility for conducting breath and blood tests for intoxication, the appointment of local traffic referral committees and the development of questionnaires and screening examinations for all driving applicants. Dr. Whitmore agreed that problems connected with traffic safety demanded much thought and study. However, he expressed concern about the possibility of the Society endorsing certain criteria as being scientifically sound when in reality there is some question. He quoted several publications dealing with tests for intoxication. He recommended that the Society be careful not to overemphasize the validity of current procedures.

It was the consensus that Council was not in a position to act on the suggestions at this time. The importance of the suggestions was recognized and it was moved that they be referred to the proper committee for further study and such action as it believed advisable. Dr. Shanholtz stated that the Department of Health would welcome the opportunity to sit in on any deliberations on the subject of traffic safety. The motion was then amended by recommending that the State Department of Health be consulted during the committee's study of the problem. The motion was adopted as amended.

The new program of the National Foundation was discussed—particularly that portion having to

do with medical scholarships. It was stated that much discontent is being evidenced about the State with respect to the many fund drives being waged by various health research organizations. A resolution, prepared by Dr. Adams, was then presented. This resolution specifically requested the Society's Delegates to the AMA to seek information concerning the real need behind the National Foundation's new activities. After some discussion, the resolution was withdrawn. It was then moved that, in view of the proposed extension of many of the health services of voluntary health agencies, the Society's AMA Delegates be asked to obtain information from AMA concerning the necessity and need of extension of these activities. The motion was seconded and adopted.

A letter from the Richmond Pediatric Society having to do with the $10.00 custodial fee for the Conference Room was then read. It was reported that some physicians felt that the Conference Room should be made available to medical groups as a service of the Society and at no obligation. After some discussion, it was moved that the previous action of Council with reference to a $10.00 fee be sustained. The motion was adopted. It was generally agreed that this action by the Council should be reported to the House of Delegates in October.

Council was advised that the Richmond Medical Assistants Association had requested use of the Conference Room and the hope was expressed that the restrictions limiting the Conference Room to physicians' groups and the Auxiliary could be waived in this particular instance. It was then moved that the Medical Assistants groups be permitted to use the Room under the same conditions applying to medical organizations. The motion carried.

Dr. Adams stated that the American Medical Association had requested each constituent society to consider and report its views on two basic questions: (1) Should the concept of free choice of physician be rigidly adhered to as essential to good medical care, and (2) what should be the attitude of local physicians toward participation in closed panel groups which restrict free choice of physician. Dr. Hundley read several excerpts from the Report of the AMA Commission on Medical Care Plans. The Society's Delegates to the AMA were particularly anxious to have some thoughts and suggestions to carry with them to Atlantic City in June. It was generally agreed that "free choice" should always be a cherished principle, but that the profession should realize that certain exceptions and modifications are always possible. After some further discussion, Dr. Hundley moved that the following statement be adopted:

> Modification of the time honored principle of "free choice of physician" is thoroughly justified when better medical services are made available to the public by such modification, and when such services are rendered in accordance with Section 6 of the "Principles of Medical Ethics of the American Medical Association". Consequently, we cannot approve of any resolution proposed to a constituent society of organized medicine which requires the undeviating, rigid adherence to the principle of "free choice of physician" without at the same time recognizing that there are times and circumstances when the principle, though valuable, should be modified to conform to particular and peculiar circumstances.

The motion was adopted.

The feeling existed that the question of "closed panel systems" could not be easily separated from the question of "free choice". It was decided that the statement just adopted would apply to both issues.

Dr. Horsley reported that the Virginia Medical Service Association (Blue Shield) stands ready to develop coverage for those persons over 65 years of age. He stated, however, that it might be advisable for the Society to formally petition Blue Shield to make such coverage available. Dr. Rawles then moved that the following statement and resolution be adopted:

> We recognize the importance of adequately meeting the health needs of that segment of the population aged 65 years and over. These needs must be provided at a cost in keeping with the modest resources or the low income that is the case with many of these individuals. The best medical care at the lowest cost can be provided, in our opinion, under a voluntary prepayment program.
>
> In the case of medically indigent in the aged group, the medical profession believes that it is the responsibility of the local political subdivision in which the individual resides to provide medical care when it is not otherwise obtainable.
>
> The medical profession, the Blue Cross and Blue Shield Plans and private indemnity companies, recognizing the importance of voluntary prepayment health coverage for those 65 and over, must work together to see that adequate medical

care at the lowest possible cost is provided for as many as possible of those in this age group. On the basis of 1957 figures it is estimated that 38.6% of those aged 65 and over have some form of voluntary prepayment insurance. This compares with an estimate of 26% for 1952.

THEREFORE, BE IT RESOLVED that the Council of The Medical Society of Virginia ask the members of the Society to continue their policy of providing medical service in keeping with the ability of the patient to pay, and, particularly in the aged group, to recognize the importance of rendering services at the lowest possible cost.

FURTHERMORE, BE IT RESOLVED that if coverage is provided for the aged group with a level of compensation which will permit the development of such insurance and prepayment plans at a reduced rate, members of The Medical Society of Virginia be asked to accept the adjusted fees in payment for services rendered to those individuals with modest resources or low incomes.

FURTHERMORE, BE IT RESOLVED that the Blue Cross and Blue Shield Plans of Virginia and the private indemnity companies domiciled in Virginia be asked to study the need and to make available policies which will provide the necessary coverage for the special needs of those 65 years of age and over at a cost commensurate with the modest resources or low income of this group.

After some discussion, it was pointed out that perhaps a guide should be developed for medical staffs. Dr. Rawles motion was then adopted. It was also directed that the resolution be published in the Virginia Medical Monthly at the earliest possible moment. The Executive Secretary was also instructed to make the resolution available to the press.

Dr. Adams reported on the new Medicare Contract and Fee Schedule and advised that the Executive Committee's efforts to negotiate the Contract on an indemnity basis were unsuccessful. A letter from General Wergeland, Executive Director of the Medicare Program, was read. The letter stated that an indemnity type plan at this time was inadvisable and premature and would pose serious administration problems. General Wergeland went on to state that indemnity type plans are undergoing serious study and indicated that much would depend upon the report of the AMA Commission on Medical Care Plans. Dr. Adams then stated that, in accordance with previous instructions from Council, the new fee schedule would not be published.

A resolution adopted by the Norfolk County Medical Society was read to the Council as a matter of information. The resolution deplored the new medicare regulations which prohibit dependents living with their sponsors in areas near service hospitals, from utilizing civilian facilities except under certain circumstances.

Considered next was a resolution from the Princess Anne County Medical Society indicating its wish to sponsor jointly, with the Norfolk County Medical Society, the 1960 Annual Meeting. The resolution also expressed the desire for the meeting to be held at Virginia Beach.

Dr. Wallace stated that should the meeting be held in Norfolk, the co-sponsor would be the Portsmouth Academy of Medicine, and that if the meeting should be held in Virginia Beach, the Norfolk County Society would be pleased to have the Princess Anne County Society as a co-sponsor. No date for the meeting has been set as yet.

Next on the agenda was a letter from the Virginia Heart Association requesting the Society to approve a resolution adopted by the AMA in June, 1958, with reference to national voluntary health agencies. That particular resolution expressed confidence in the programs and fund raising policies of such agencies and stated that they should be left free to carry forward their programs without interference.

During the ensuing discussion, it was pointed out that in December, 1958, the AMA had adopted another resolution which pointed out that the action taken in June had been interpreted by some as disapproving the inclusion of voluntary health agencies in United Fund drives. The resolution went on to state "that the AMA neither approves nor disapproves of the inclusion of voluntary health agencies in United Fund drives." In view of this more recent action by the AMA, the Executive Secretary was instructed to write the Virginia Heart Association and advise them accordingly.

Mr. Duval then advised Council that a study of Virginia's Civil Defense Law had been made at the request of the AMA and that, in his opinion, the present law was acceptable. It was not believed necessary to seek further revision of the law at this time.

Mr. Duval then went on to report a proposed bill recommended by the Committee on Radiation Hazards. He stated that the bill would, in general, establish a state agency which would cooperate

with the federal government against the hazards of radiation and radio active materials. Mr. Duval indicated he had rewritten certain sections of the bill in order to comply with the Committee's recommendations and also urged that the Committee cooperate with a special study committee of the VALC which will soon hold hearings on this very problem. Dr. Shanholtz covered the basic provisions of the bill and stated it had been studied by the national committee under Dr. Chamberlain.

It was then moved by Dr. Rawles that Council approve the tenor of the bill and authorize the Committee on Radiation Hazards to represent the Society at hearings conducted by the VALC Committee. It was further moved that the Society advise the VALC Committee it would like to be represented at the hearings. The motion was seconded and adopted.

The matter of a second injury law was then discussed and Mr. Duval stated that another study committee of the VALC will hold hearings on the question soon. It was requested that these meetings be called to the attention of the Sub-Committee on Industrial Health.

A question was raised concerning duties of the Second and Third Vice-Presidents. It was thought the services of these officers could be used to much greater advantage. Dr. Adams stated that it was his intention to use the Vice-Presidents as representatives of the Society at various conferences whenever possible. This was considered a good idea.

A resolution adopted by the Norfolk County Medical Society with reference to compulsory polio immunization was then read. It was the feeling that polio immunization should be required for children entering school and such legislation should be sought. Mentioned was the fact that the North Carolina Medical Society has embarked on a campaign requiring evidence of polio immunization before students can be registered in colleges and camps. The Executive Secretary reported that copies of the North Carolina program had been sent to the Committee on Preventive Medicine.

It was then moved that the question be referred to the Committee on Preventive Medicine and also the Committee on Child Health. The motion was adopted. Dr. Shanholtz stated it might be well to remember that any health service of a compulsory nature is most always a free service.

The Executive Secretary reported that arrangements had been made to award certificates of appreciation to the Society's past-presidents at the next Annual Meeting. The total cost, including the necessary plate for engraving purposes, was estimated at $75, and a special appropriation in this amount was authorized. It was then decided the certificates should be presented unframed.

The Council was then advised of a request from members of the Woman's Auxiliary in Roanoke for a special appropriation of $450 to be used in connection with the Auxiliary's 1959 Annual Meeting. It was reported that, in at least one instance, the local medical society had borne the financial burden. It was generally agreed that local medical societies should not be so penalized.

A motion was then introduced authorizing the requested appropriation. However, during the ensuing discussion, it was believed wise to first have Dr. McCausland contact the Auxiliary representatives and go over their plans with them. The motion was then withdrawn and a new motion introduced leaving final disposition of the request to representative of the Roanoke Academy of Medicine and the State Office. The special appropriation of $450 was authorized if it was considered necessary. The motion was adopted.

Council was informed that the Local Committee on Arrangements for the 1959 Annual Meeting had sought advice with reference to prizes to be awarded in connection with the commercial exhibits. The advice was needed since a matter of policy was involved concerning whether or not the Society should continue to purchase the prizes or seek to have them donated by the pharmaceutical houses. It was moved that the Society be authorized to purchase the prizes in an amount not to exceed $100. The motion was adopted.

Dr. Wright stated that, in his opinion, the Second and Third Vice-Presidents should be invited to attend all Council meetings in a non-voting capacity. The Executive Secretary was instructed to advise the Second and Third Vice-Presidents of this decision and to make sure that they are invited to attend future sessions.

There being no further business, the meeting was adjourned.

Robert I. Howard
Secretary

APPROVED:

Walter P. Adams, M.D.
President

Woman's Auxiliary....

President—Mrs. Charles A. Easley, Danville
President-Elect—Mrs. Walter A. Porter, Hillsville
Vice-Presidents—Mrs. George K. Brooks, Richmond
Mrs. James M. Moss, Alexandria
Mrs. W. A. Eskridge, Parksley
Recording Secretary—Mrs. Robert B. Keeling, South Hill
Corresponding Secretary—Mrs. J. J. Neal, Danville
Treasurer—Mrs. Wyndham B. Blanton, Richmond
Publication Chairman—Mrs. Custis L. Coleman, Richmond
Directors—Mrs. J. R. St. George, Portsmouth
Mrs. Lee S. Liggan, Irvington
Mrs. Maynard Emlaw, Richmond

Mental Health

I appreciate very much the honor of being invited to discuss some phases of mental health before your group. Since no definite subject was discussed or requested, I will take the liberty to discuss briefly several items that I feel are important to the mental health program, for the moment at least.

At the onset of this discussion I am reminded that for some time the Council on Mental Health of the American Medical Association has strongly urged that a mental hygiene committee be formed in the Woman's Auxiliary of the State Medical Societies and that the chairman of each committee be invited to sit in as a permanent guest member at the meetings of the Mental Health Committee of the State Medical Society. As chairman of the Mental Hygiene Committee of The Medical Society of Virginia for the year 1958, I invited the chairman of the Mental Hygiene Committee of your auxiliary to attend our meetings, but unfortunately, due to some conflict, she was unable to attend either of our meetings. As I am again chairman of the Mental Health Committee for the year 1959, I wish to extend to the chairman of your Mental Health Committee a most cordial invitation to attend our committee meetings. She will receive due notice of the time and place of our meetings.

At this time I would like to draw to your attention the position of the Woman's Auxiliary in the community in which you live. Because you are married to doctors, it is generally considered by the average person that you are authorities on all things medical—and I say facetiously—perhaps once removed. Therefore, through your contacts at P.T.A. meetings, bridge clubs, cocktail parties and the like, you can wield much influence as an oustanding lobbyist for things pertaining to the medical profession. With this in mind, I sincerely solicit your aid for the cause of mental health in your community.

There is a rapidly growing need for concern about the whole problem of mental illness and health in America. There is, therefore, a sharp challenge to all of us, and for science generally, to master and control these problems so that we will be in a position—as the leading medical profession in the world today—to provide guidance toward proper public policy with respect to treatment needs for patients and, more particularly, for the development of preventive techniques.

The whole problem of mental illness is becoming recognized as one of our most pressing problems of health for the American people. It is the special responsibility of medical societies, the woman's auxiliaries and the medical profession generally to take such steps as will enable the profession as a whole to assume leadership in the field of mental health which is the proper responsibility.

In spite of the tremendous advances that have been made in the past few years in the understanding of mental illness, we know that we will have a terrific problem, particularly with so-called functional psychoses such as schizophrenia and the psychoneuroses, which are seemingly unlimited.

For some time I have been very interested in Blue Cross and Blue Shield coverage for mental illness. Consequently, this has been an item of major interest to the Mental Health Committee since I have been a member of the committee. For many years it was shameful the manner in which all insurance companies discriminated against the individual who was so unfortunate as to develop a mental illness and consequently had to be hospitalized. I can recall that at one time no insurance was available for mental illness. During the past four or five years we feel that considerable progress has been made insurance wise for mental illness. At first the Richmond Blue Cross and Blue Shield Plan allowed ten days' coverage in a psychiatric unit for mental illness, alcoholism and drug addiction. In June, 1958, this was increased to sixty days for the same conditions.

Unfortunately, there are areas in Virginia that do not have the coverage comparable to the Richmond Plan. At the present there are four plans in

Address delivered at The Workshop of the Auxiliary to The Medical Society of Virginia, Richmond, February 10, 1959.

the State of Virginia—the Richmond, Roanoke, Norfolk and Lynchburg. I give you these names because I feel that your auxiliary could not render a more humane service than contacting the director of these plans in your locality and put all the pressure possible on them to bring about an equitable coverage for mental illness. Even our Richmond Plan is not all that would be desired because it does not equal the coverage allowed in some other states. I can say though for the Executive Director of the Richmond Blue Cross and Blue Shield Plan that he has been most cooperative, and I feel that he is very sympathetic with this problem. He has met with our committee on several occasions and has been responsive to our suggestions. I hope that each of you on returning home will take it upon yourself to discuss this problem with your husband and others in important places who can bring pressure to bear on the insurance companies in behalf of these unfortunate people. Since over half the beds in the hospitals of the United States are occupied by mental patients, it definitely would be a saving from a tax standpoint. I am sure that should more mental patients have insurance made available to them it would be possible for them to obtain treatment in a private psychiatric unit, thereby lessening materially the patient load in our various state institutions.

During the year 1957 our committee was very interested in the nursing home situation throughout the State of Virginia. One of the members of the committee made an interesting and comprehensive survey of nursing homes in Virginia. In his survey he found that approximately 35 per cent of the patients in nursing homes had mental infirmities and one third of the patients were in need of psychiatric supervision.

It is my feeling that any institution, hospital or home for the care and treatment of the mentally ill, epileptic, mentally deficient persons, or persons addicted to the intemperate use of narcotic drugs, should be licensed and adequately inspected from a psychiatric standpoint.

I think that what I have just said concerning nursing homes ties in very well with a problem that is most important throughout our entire country, namely, mental illness and health in the aged. Our reason for concern is that there are fifteen million people in the United States at present over the age of 65. Their potential need for medical services at present is very great and will increase. The American Medical Association expressed its awareness of the present and future problem in establishing a committee on the aging. It has recently held a planning conference of medical society action in the field of aging and has produced a blue print entitled: "The New Era of Aging", a positive health program for older citizens and a pamphlet entitled: "Health Aspect of Aging". It is hoped that these aids will be of service to state, county societies and to your own auxiliary. Too often doctors have not regarded mental illness and health in the aged as an area worthy of their best efforts. There is ample evidence that a more hopeful attitude can be constructive in shaping social attitudes toward senior citizens.

In my opinion medicine must make a positive approach and register concern for the 350,000 old people in nursing homes and 350,000 over the age of 65 who are in institutions, including general hospitals, state hospitals, old people's homes, prisons, etc. With this in mind I feel that it behooves all of us to do everything we can to improve the standard of nursing homes where so many of our aged in Virginia are now quartered.

I do not mean that merely the improvement of the standards for nursing homes is all that we should do for the aged, but that in my opinion is an area where the most improvement is needed. In addition to nursing homes our interest in the aged should also be directed toward their care in general hospitals, state hospitals, etc. It is certainly not my opinion that the aged as a whole should be rushed off to a nursing home or a state hospital. On the contrary, I feel that the senior citizen, as I am sure he would like to be called, has a need to preserve his essential dignity. He must feel useful and wanted. He must feel that he still has a place in the social group. Whenever possible, the old person should be maintained in his own home. Familiar surroundings and friends do much to provide stability. The old patient should be kept in the hospital only as long as his symptoms cause distress, and it is for this group that my interest and concern are increased for better facilities in nursing homes and hospitals.

Not only am I concerned about the nursing home situation as it relates to the treatment of the aged, but the Mental Health Committee in 1958 heard a report from a representative from the office of the Commissioner of Mental Hygiene and Hospitals to the effect that quite a number of mentally defective children are currently being cared for in nursing homes which are very poorly equipped and the children receive little, if any, medical care. It was the

consensus that something should be done concerning this situation. It was decided to bring this to the attention of the Woman's Auxiliary and invite their assistance in promoting an educational campaign through P.T.A. and other organizations, hoping thereby that public attention could be aroused and that in some way an effectual means could be found to remedy this situation.

To understand the seriousness of the mentally defective and retarded child statistics show that three and one half per cent of the population are retardates and that seven per cent of the children in the population have learning disabilities. One in one thousand of the general population will be mentally retarded and will need care for the rest of his life, and four of the mentally retarded population can be helped and twenty-five in the same population of the mentally retarded can be self-supporting with adequate care and education. The attitude toward mental defectiveness and mental deficits in children in general has been greatly changed because of greater research into the diagnosis and nature of the mental deficit. There are many misconceptions and a great deal of ignorance still existing today concerning this problem. What we need is to move ahead with better means of diagnosis, and in this way we no doubt will find that many who have been diagnosed as mentally retarded, feeble-minded and the like are not in this category at all.

It is obvious that if psychiatry is to make any real contribution in the area of mental deficiency that the emphasis must be placed on a more accurate diagnosis. The more psychiatry can contribute to the diagnostic field, the greater chances there will be that many children who are presently diagnosed as feeble-minded, mentally retarded, etc., will not fall into this category. Too often retarded children are kept in school with no effort made to find the cause of the deficit. It is the feeling of many that there is a great need for all purpose child psychiatric diagnostic centers in each state, so that it will be possible to separate feeble-mindedness from other mental deficits which might be more effectively treated. Frequently parents who get the feeling that the child is not developing normally mentally do not know where to get help. As yet, there are too many untrained people in this field. There are not enough psychiatrists in the general population, and there are only about two hundred child psychiatrists who are qualified in the United States. I will have more to say about this later in this discussion.

The following has been recommended by those who are interested in this phase of mental health:

1. Psychiatrists and pediatricians will need the help of auxiliary groups to carry out programs for the child with a mental deficit.

2. It will be necessary to rely on the teacher, psychologist, social worker and other lay groups to carry out programs and even help in diagnosis.

3. Schools for retarded children should be schools for retarded children. There is need for separation of delinquent and aggressive defectives from the child who can be trained.

4. There is need for all purpose psychiatric diagnostic centers in each state, whether it is in- or out-patient type.

5. Day care programs for younger children.

6. Counselling and guidance for parents.

7. More special classes in schools for the child who has a learning deficit.

8. Teacher training programs.

Quite frequently the question is raised, why is it necessary for our state institutions to employ physicians from foreign countries to places on the medical staff. They complain that very many of them have so much difficulty speaking English that the patients, as well as the families, find it extremely difficult to understand them. This, of course, presents quite a problem to a mentally sick patient who is having difficulty understanding what it is all about in his confused state of mind. I am told that the reason for this is that there is still a shortage of psychiatrists in this country. I feel that a campaign of some kind should be put on to get more of our medical students interested in psychiatry.

It is my opinion that psychiatric education of medical students has long lagged behind the other branches of medicine. For years some of my medical brethren, unfortunately, had a tendency to look on psychiatry with scorn and ridicule; and no doubt some years ago there was a seeping of this attitude into the higher echelon who had to do with the curriculum in the medical schools. I know that most of you certainly have an interest in mental health and what it means in your community. We are far from achieving our goal in this field, but we are steadily but slowly making progress. As I have said, there have been many road blocks due to ignorance and a certain amount of jealousy, but with the help of such groups as yours I believe the public generally can be better enlightened about mental health and thereby dispel the belief of many that medical illness is a stigma and cannot be helped by scientific means.

John R. Saunders, M.D.

Editorial . . . .

Interpretation of the Electrocardiogram

THERE ARE THREE major methods of interpretation of the electrocardiogram concurrently employed and most of us use all three to a greater or lesser degree. The first is simple pattern electrocardiography in which one memorizes the normal patterns and variations, then reviews the electrocardiogram and compares this with the normal. Various patterns which have been shown to indicate particular pathological conditions are also learned and with practice usually become readily recognizable. These patterns include left and right ventricular hypertrophy, bundle branch block, myocardial infarction, evidence of ischemia and changes due to drugs. This method does not require an understanding of why the patterns occur and limits the interpretation to so-called clinical experience which is difficult to quantitate. Certainly experience is necessary but it should be based on fundamental knowledge.

Unipolar electrocardiography became popular about fifteen years ago and has been valuable since it offers a logical explanation for various electrocardiographic patterns. This method is based on Dr. Frank N. Wilson's experimental and clinicopathologic observations. The unipolar theory postulates that an exploring electrode placed on various parts of the body and paired with an indifferent electrode records an electromotive force which is similar to that which develops on the heart surface facing the electrode. Thus these semi-direct leads which are placed over the right ventricle record right ventricular potential and over the left ventricle, left ventricular potential. These are called right and left ventricular patterns. Electrodes are strategically placed on the left arm, left leg and right arm. Electrodes are also placed at various points over the precordium and the position of the two ventricles theoretically determined. Changes in the electrical position and perhaps the anatomical position of the heart are thought to be determined by observing the potential recorded at these areas. It is assumed that a myocardial infarction is recognized by the placement of the exploring electrode on the chest wall facing the infarcted area. Exploration of the chest wall with this electrode is thought to give information not provided by the standard precordial leads. This concept, though subject to criticism, has been useful and instructive.

The third method utilizes the vector concept. This assumes that the electrical activity begins in the center of the heart and this can be recorded by placing the electrodes on the body surface so that the projection of the electrical forces can be determined on the frontal plane, sagittal plane and horizontal plane. This also assumes that these electrical forces are reflected on each lead though on some it is greater than others, depending on the direction of the force and the location of the lead axis. The instantaneous vectors are recorded at four milli-second intervals and a loop automatically visualized on a cathode ray oscilloscopic screen by electrical integration of

two leads. This image can be photographed and the loops indicating depolarization of the atria and ventricles and repolarization of the latter studied. This method is experimental and at the present time impractical for clinical uses.

The vector concept is useful, however, and has clinical application in what Grant calls vector electrocardiography. This has recently gained popularity and seems to be particularly helpful in that it brings together vector cardiography and electrocardiography both as to thinking and as to terminology. In this method of interpretation the electrocardiogram is taken in the usual manner. The standard and unipolar extremity leads are frontal plane and the precordial leads are horizontal plane leads. The instantaneous electrical vectors can be plotted as projected at .02 second intervals and the frontal plane loop easily constructed. The mean electrical vector can be oriented in space by determining its projection on the frontal plane and then on the horizontal plane. The location and direction of the major electrical potential of the heart can be determined and this is particularly useful in detecting right and left ventricular hypertrophy.

The initial and terminal electrical vectors can also be oriented in space. The former is useful in the location of myocardial infarctions and the latter is important in the diagnosis of conduction defects.

The ST and T vectors can also be spatially oriented in a similar fashion and give information regarding ischemia and injury of the heart muscle.

The vector concept seems to be particularly useful in the understanding of the basic principles of electrocardiography particularly since new methods of recording will probably be developed and new systems of leads employed. It will be as easy to interpret these new recordings as the old, if this concept is understood.

Regardless of how the electrocardiogram is taken or what method of interpretation is employed, we must realize that it is only one useful tool in our diagnostic armamentarium and by no means replaces a careful history and physical examination. Excepting arrhythmias electrocardiograms should not be expected to indicate definitive etiologic diagnosis. Moreover, neither can the functional capacity of the heart be determined nor the ability of an individual to withstand surgery be estimated by an electrocardiogram alone.

It seems important to emphasize that the electrocardiogram must be interpreted with the clinical data in mind and not as a isolated reading. Electrocardiograms are frequently sent to physicians who read them without clinical data. Their interpretation should not then be diagnostic and the possibilities reported rather than a definitive diagnosis given. There are honest differences of opinion in interpretation which would be resolved if the clinical data were known.

The ultimate responsibility rests on the physician who is managing the patient and he should integrate the electrocardiographic interpretation with his clinical information and not expect the electrocardiogram to solve the problem either of diagnosis or management.

JULIAN R. BECKWITH, M.D.

From the Cardiovascular Section, Department of Internal Medicine, University of Virginia Hospital, Charlottesville.

The Keogh Bill and Senator Byrd

THE KEOGH-SIMPSON BILL, which would permit tax deferral by the self-employed up to $2500 annually, passed the House in March with not more than 15 or 20 members dissenting. The tax relief this proposed measure would afford physicians, the largest group not covered by social security, would be considerable. While taxes would eventually be paid on this income, the saving would be material, for the tax ultimately would be figured in terms of the reduced income of the elderly physician and not on the basis of the high tax bracket he was in at the time the tax was deferred.

The question now arises as to whether the Senate will act on the measure this year or postpone action until 1960. Last year Senator Byrd, Chairman of the Senate Finance Committee, held no hearings on the bill because it reached his committee near the end of the session.

It is felt by some that Senator Byrd is opposed to this bill on two counts. There unquestionably would be a loss to the treasury of the United States to the same degree that tax relief would be afforded to the affected physicians, and our senior Senator has always taken a dim view of anything that makes the budget harder to balance. A second, and more difficult objection to evaluate, is the possibility that other groups might seek the same tax deferral with a correspondingly greater tax loss if their efforts should prove successful.

These factors, no doubt, loom large in Senator Byrd's consideration of the bill. On the other hand, he has always been a friend of the medical profession in Virginia and has sought to advance our interests with the same vigor that he has shown in aiding other law-abiding groups in the State. This means that he probably is facing a difficult decision regarding the Keogh-Simpson bill. It is the hope of the medical profession in Virginia that the Senator will find it possible to support this measure.

H. J. Warthen, M.D.

Current Currents

SOLID PROGRESS has been made by the AMA's program to improve the health care of the nation's aged population, according to Dr. Leonard W. Larson, Chairman of the AMA's Board of Trustees. Dr. Larson stated that the development of new insurance programs and expansion of existing lower cost protection for persons 65 and over are moving forward "even faster than many of us would have dared hope only a few months ago". State and local medical societies have been credited with acting promptly and decisively in carrying out their parts of the program.

A RAPIDLY INCREASING number of foreign trained physicians are taking the qualifying examination of the Education Council for Foreign Medical Graduates. Only 298 took the first examination in March 1958. Since that time, however, the examination attracted 844 in September 1958 and 1,772 in February 1959. More than a thousand have already registered for the next examination to be offered September 22 of this year.

The Council, with offices in Evanston, Illinois, aids graduates of foreign medical schools in establishing their qualifications to obtain internships or residencies in United States hospitals.

Applications for the next qualifying examination must be in the ECFMG Offices at 1710 Orrington Avenue, Evanston, Illinois, by June 22.

SOME CONFUSION still exists concerning the accreditation of hospitals and the approval of intern and resident training programs. The Joint Commission on Accreditation of Hospitals emphasizes the fact that it accredits hospitals only and has no responsibility for the approval of educational programs. The responsibility for the latter is borne by the American Medical Association, and inquiries concerning these programs should be directed to its Headquarters at 535 North Dearborn Street, Chicago 10, Illinois.

THE V.A. HOMETOWN CARE PROGRAM has been endorsed by the AMA Committee on Federal Medical Services as the best method of providing out-patient care for service-connected disabilities. According to the Committee "this method appears to be the most effective way of maintaining the continuity of care and the personal relationship between physician and veteran patient so important to good medical care." The Committee recommended expansion of the intermediary type of program.

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CANADA has launched its own accreditation program. Motivated by an admirable spirit of national independence, the Canadian Council on Hospital Accreditation has assumed the responsibility of accrediting hospitals in that country. In order that it can give its full support to this new program, the Canadian Medical Association has re-signed its membership in the Corporation of the Joint Commission on Accreditation of Hospitals.

THE COST of educating the future physician is high. Few realize that the tuition paid by the student covers only 18.2 per cent of the actual cost of his training. Some of this deficit is made up by endowment income coupled with grants and requests from individuals and foundations. But—a gap remains, and only AMEF can fill it. AMEF funds enable the school to keep valued faculty members, attract others, and purchase necessary equipment at the time it is needed. In short, unrestricted money from AMEF provides a means of helping the medical schools meet a grave problem without resorting to federal aid and its eventual control.

Remember that your gift to AMEF can be earmarked for your alma mater.

NEWSPAPERMEN like to work with people who know their problems and needs. Those in charge of getting medical society news to their community papers will find the answers to many questions in a handbook entitled "How to Make Friends with the Press". This handbook is published by the Blue Cross Commission, and describes what events are likely to interest a paper and how to go about getting them published. Questions on whom to approach on a particular story, when to send a release by mail and when to take it in person, and what information a release should contain are all answered in well-illustrated terms. Twelve newspaper editors reviewed the book before publication and contributed their suggestions and ideas.

A limited number of copies are available at no cost from the Blue Cross Commission of the American Hospital Association, 840 North Lakeshore Drive, Chicago 11, Illinois.

A SURVEY designed to show why people resist polio vaccination efforts has been completed by the California Department of Public Health. The survey was conducted among uninoculated citizens and it was learned that the biggest reasons for not obtaining protection were fear and procrastination. Fourteen per cent of those interviewed questioned the safety of the vaccine. Forty-six per cent said that they were too busy or couldn't be bothered. Expense was a problem to fifteen per cent of those earning under $2,000 a year. Twenty-four per cent of those having children under 6 years of age thought their offspring too young for the shots. Local societies will wish to keep these arguments in mind when planning campaigns.

Society Activities . . . .

Lynchburg Academy of Medicine.

Dr. L. R. O'Brian, Jr., has been named president-elect, succeeding the late Dr. John G. Holland.

Tri-State Medical Association.

Dr. Robert A. Rose, University of North Carolina, was installed as president of this Association at its meeting in Winston-Salem, North Carolina, in March. He succeeds Dr. W. R. Jordan, Richmond. Dr. Furman Wallace, Spartanburg, South Carolina, has been named president-elect.

Virginia Academy of General Practice.

The 9th Annual Scientific Assembly of the Academy will be held in Richmond, May 7-10, at The Jefferson Hotel. Dr. W. Linwood Ball, Richmond is president.

There will be a golf tournament at the Lakeside Country Club on the 7th, beginning at 10:00 A.M., and at 7:45 P.M., a bus will leave the Jefferson Hotel for a play at the Barksdale Memorial Theatre at Hanover Court House.

On Friday, the Virginia Diabetes Association will present their annual program as follows: Oral Hypoglycemic Agents by Dr. Leo P. Krall, Joslin Clinic, Boston; Eye Complications in the Diabetic by Dr. L. Benjamin Sheppard, Richmond; and Peripheral Arterial Disease in the Diabetic by Dr. William R. Sandusky, University of Virginia. At the afternoon session, Dr. C. Bernard Brack, Johns Hopkins Hospital, will speak on Early Diagnosis of Uterine Cancer. He is being presented through the courtesy of the Virginia Division of the American Cancer Society. Dr. Richard H. Kirkland, Richmond, will speak on Newer Concepts in the Management of Thyroid Disease. The Hirsute Female will be the subject by Dr. Robert B. Greenblatt, Medical College of Georgia. This speaker is being sponsored by The National Drug Company.

On May 9th, the following program will be presented: Some Problems in Geriatric Medicine by Dr. Edward Henderson, Editor-in-Chief of the Journal of the American Geriatric Society, Montclair, New Jersey. Dr. Milton Rapoport, Children's Hospital, Philadelphia, will speak on The Child Handicapped by Nephrosis, and Dr. George G. Deaver, New York University Institute of Physical Medicine and Rehabilitation, will discuss The Child Handicapped by Cerebral Palsy. Drs. Rapoport and Deaver are presented through the courtesy of the Nemours Foundation and the Virginia Council on Health and Medical Care. Therapeutically Induced Weight Gains in Hypertensives will be presented by Dr. Harold Feldman, Livingston, N. J., through the courtesy of the Nordson Pharmaceutical Laboratories, Dr. Edmund F. Finnerty, Jr., Boston, will speak on Newer Concepts in the Treatment of Common Skin Diseases, and Dr. Nicholas E. Capeci, West Point, Pennsylvania, on The Present Status of Adrenocortical Steroid Therapy.

The Banquet speaker will be T. Coleman Andrews, Richmond, his subject being Wasteful Spending, Confiscatory Taxation and Inflation are not Laughing Matters.

On Sunday morning, Dr. Francis L. Chamberlain, President of the American Heart Association, San Francisco, will present The Treatment of Hypertension, and Mr. Horace Cotton, Southern Pines, North Carolina, will speak on Ten Years of Socialized Medicine. A religious service, conducted by The Rev. Richard C. Fell, Richmond, will close the session.

News Notes....

New Members.

The following doctors have been admitted into membership in The Medical Society of Virginia since the list published in the April issue of the Monthly:

Dr. Joseph Eugene Bartkowski, Arlington
Dr. Albert Joseph Bisese, Norfolk
Dr. Margaret E. Crowder, Petersburg
Dr. Barry Decker, Richmond
Dr. Alvin William Finestone, Clifton Forge
Dr. George J. Fleury, Jr., McLean
Dr. Owen Gwathmey, Richmond
Dr. Alfred G. Johnson, Petersburg
Dr. William Stone Jordan, Jr., Charlottesville
Dr. Hulbert Jay Kanter, Norfolk
Dr. Milton H. Kibbe, Colony
Dr. Fraz Michael Kraler, Hayes
Dr. F. H. McMullan, Richmond
Dr. Franklin B. McKechnie, Richmond
Dr. Russell Watson Roberts, Charlottesville
Dr. Robert S. Smith, Dinwiddie
Dr. Henry Harrison Wilson, Jr., Richmond

Honors Dr. Dodson.

The Virginia Kidney Foundation has named its annual research grant in honor of the late Dr. Austin I. Dodson. This year's grant will amount to $10,000 and will be used in conjunction of the organization's new kidney clinic.

"Gun Totin'" Secretary.

Robert I. Howard, executive secretary of The Medical Society of Virginia, has won top honors in the spring meet of the Carolina Gun Collectors' Association at Winston-Salem. He is the first member of the Virginia association to win the award since it was organized in 1952. "Bob" received the best of show award for his exhibit on Confederate arms, featuring shoulder arms and revolvers.

Poison Control Center at the University.

A Poison Control Center has recently been established at the University of Virginia Hospital. The purpose of the Center is to minimize the damage to children and adults from the ingestion of potentially toxic substances; to coordinate the various types of general and specific treatment measures required in the hospital, the physician's office, and to make the resources for treatment readily available.

A portable locked cart has been designed to contain the necessary therapeutic agents. This cart will also contain necessary supplies, drugs, antedotes, equipment, and reference material for prompt treatment.

The reference material in the Center includes Poison Index Cards received from the National Clearinghouse for Poison Control Centers, reprints of articles relative to poisons, and books.

The Poison Control Center cart will be located in the Pediatric Clinic of the Hospital, Monday through Friday, from 8:00 a.m. to 5:00 p.m. From 5:00 p.m., it will be in the emergency room. It will also be in the emergency room on Saturdays, Sundays and holidays.

Dr. Austin I. Dodson, Jr.,

Has accepted the post as interim chairman of urology at the Medical College of Virginia, replacing his father. He will serve temporarily until a report from the faculty committee and action by the Board of Visitors.

Virginia Board of Medical Examiners.

At the meeting of the Board held in Richmond on December 6, 1958, the following physicians were licensed by examination:

Dr. Apostolos Alekoumbides, Marlboro, N. J.
Dr. Wasfi Antum Atiyeh, Richmond
Dr. Boghos Bedrossian, Syracuse, N. Y.
Dr. Jeffrey Douglas Beeson, Petersburg
Dr. Johan L. Binkhorst, Charlottesville
Dr. Giulio Callari, Richmond
Dr. Frank Campo, Trenton, N. J.
Dr. Gilbert Reed Clark, Silver Spring, Md.
Dr. Jacqueline Gotlibas Coant, Woodbury, N. J.
Dr. Zeki Erim, Arlington
Dr. Fulton Williams Fite, Denver, Col.
Dr. Wolfram Richard Forster, Alexandria
Dr. Alfonso Briosa e Gala, Toledo, Ohio
Dr. Peter Harold Robert Hawkes, Norwick, Conn.
Dr. Henry Desmond Hayes, Petersburg
Dr. Engelbert Hecker, Youngstown, Ohio
Dr. Wellington Hung, Washington, D. C.
Dr. Troy Howell Hutchinson, II, Kansas City, Kans.
Dr. Yoshiki Ishizaki, Richmond
Dr. Alfred Jerofke, Marion
Dr. James Byrd Johnson, Ewing
Dr. Rudolph Keebling, Columbus, Ohio
Dr. Antoine Khoury, Canton, Ohio
Dr. Rolf Alfred Koehler, Cleveland, Ohio

Dr. Guenter Johannes Loderstedt, Annandale, N. J.
Dr. Desmond John Hubert Longford, Petersburg
Dr. Gerhard Hans Lukowsky, Arlington
Dr. John Alfriend Mapp, Norfolk
Dr. Hildegard Maricq, Montclair, N. J.
Dr. Louis Benedict Massad, Arlington
Dr. Stage Edmund Miller, Winchester
Dr. Geertruida D. J. Z. Moll, Hampton
Dr. Hiroharu Nakazato, Kew Gardens, N. Y.
Dr. Rolf-Guenther Nissen, Warren, Ohio
Dr. Andre Edgar Numa, Wilmington, N. C.
Dr. Fausto Obregon, Marion
Dr. Zeno George Paclisanu, Staunton
Dr. Ramon Benito Perez, Milledgeville, Ga.
Dr. Joseph Pizzino, Canton, Ohio
Dr. Jeanne Marie Plunkett, Dallas, Tex.
Dr. Joseph Francis Possert, Cleveland, Ohio
Dr. Raymond Arthur Robbins, New York, N. Y.
Dr. George Donald Roberson, Richmond
Dr. Cornelis Rol, Richmond
Dr. Lily Ruckstuhl, Marchantville, N. J.
Dr. Emile Selim Sayegh, Portsmouth
Dr. John Barry Sherry, Waynesboro
Dr. Konrad Hermann Soergel, Boston, Mass.
Dr. Alfred Strauss, Trenton, N. J.
Dr. Henry Joseph Tucker, Jr., Richmond
Dr. Ruth Vankai, Arlington
Dr. Antonio Velo, Richmond
Dr. Louis Ventura, Burkeville
Dr. Alice Wolfsohn, New York, N. Y.

The following were licensed by endorsement of credentials:

Dr. Charles Newton Austin, Abingdon
Dr. Ronald G. Barsanti, Vienna
Dr. Thomas Rector Bass, Tazewell
Dr. Edward Charles Bauer, Roanoke
Dr. Mannheim Mendel Bocknek, Falls Church
Dr. Jacqueline Bodia, Norfolk
Dr. Joseph Dixon Cauthen, Jr., Norfolk
Dr. Reneal Claire Cobb, McLean
Dr. Robert Thornhill Coffman, Keyser, W. Va.
Dr. Robert Lee Cozine, Manassas
Dr. Joseph D. Cuona, Caldwell, N. J.
Dr. Alan McCulloch Drummond, Falls Church
Dr. William McCoy Eagles, Richmond
Dr. William Gamm Eckert, Norfolk
Dr. DuBose Egleston, Waynesboro
Dr. Joseph Charles Evers, Washington, D. C.
Dr. Charles Lee Ferguson, Philadelphia, Pa.
Dr. Alvin William Finestone, Clifton Forge
Dr. Allan Louis Forbes, Richmond
Dr. Louise Trent Gardner, Wise
Dr. Thomas Aquinas Gilday, Washington, D. C.
Dr. Mary Townsend Glassen, Galax
Dr. Robert Evan Goyne, Waynesboro
Dr. Philip Shepard Grant, Staunton
Dr. Stanley Joseph Haberek, Silver Spring, Md.
Dr. Archibald Southgate Hampton, Luray
Dr. Allen Lee Haslup, Portsmouth
Dr. Phyllis Ray Ingram, Charlottesville
Dr. Arthur Thomas Jones, Alexandria
Dr. William Ellis Josey, III, Norfolk
Dr. Hulbert Jay Kanter, Norfolk
Dr. John Francis Kelly, Falls Church
Dr. John Aaron Kidwell, Weyers Cave, Va.
Dr. James Morgan Loftus, Washington, D. C.
Dr. Paul Hargrave Logan, Petersburg
Dr. Norman Lowe, Norfolk
Dr. Alfred John Luessenhop, Washington, D. C.
Dr. Charles Mawhinney, Jr., Alexandria
Dr. James Gordon McFaddin, Bristol, Tenn.
Dr. Richard Alan Nelson, Grundy
Dr. James Edward Newby, Jr., Great Lakes, Ill.
Dr. James Ellsworth Chiles Norris, Kilmarnock
Dr. Roy Burlew Parsons, Jr., Wytheville
Dr. Sylvia Negron Payne, Arlington
Dr. Leonard Theodore Peterson, Chevy Chase, Md.
Dr. Philip Ernest Ramirez, Jr., Charlottesville
Dr. Paul Alexander Ryan, Falls Church
Dr. Guy Anthony Settipane, Portsmouth
Dr. Arnold Shamaskin, Springfield
Dr. Robert Julius Sherman, Washington, D. C.
Dr. Hugh Van Sickel, Falls Church
Dr. Broadus Frederick Sowell, Lawrenceville
Dr. Martin Lawrence Stoker, Arlington
Dr. Henry John Strenge, Roanoke
Dr. James Michael Stucki, Arlington
Dr. Timothy James Tehan, Bethesda, Md.
Dr. James Clyde Vanneter, West Palm Beach, Fla.
Dr. Willard Beecher Walters, Washington, D. C.
Dr. Albert David Warshauer, Louisville, Ky.
Dr. James Elijah Wheless, Roanoke
Dr. Francis Edward Winslow, Virginia Beach
Dr. Nina Bencich Woodside, Fairfax
Dr. Charles Adam Zeller, Marion

Dr. William H. Muller,

Chairman of the department of surgery at the University of Virginia, was a member of the panel on cardiovascular surgery at the sectional meeting of the American College of Surgeons in Montreal, Canada, April 6-9.

Harvest Festival in Roanoke.

The Harvest Festival will be held in Roanoke on October 3rd, which is the day before the opening of the annual meeting of The Medical Society of Virginia. The Harvest Bowl football game will be played between VPI and William and Mary. The Roanoke Council of Garden Clubs will again present their show "Color and Fashion for Living", a million-dollar display of fashions, furnishings and educational exhibits. An industrial exhibt "Index" will also be held at this time.

The Harvest Festival is sponsored by the Junior League of Roanoke, the proceeds of which are used for their community projects. Anyone desiring tickets for the football game may contact Mrs. Harry C. Johnson, Jr., 2122 Rosalind Avenue, Roanoke, Virginia.

"Heart Day" Symposium.

The second annual all-day cardiac symposium to be sponsored by the Heart Association of Northern Virginia will be held on June 3rd at the Marriott's Motor Hotel on Route 1 near Washington, D. C. Dr. Raymond Schwartz, chairman, has announced that the meeting will cover two major topics of interest to every physician with cardiac patients: 1. Surgically Reversible Heart Disease—Its Diagnosis and Treatment; and 2. Cardiac Resuscitation. The following speakers will be presented: Drs. Helen Taussig and Henry Bahnson, Baltimore; Drs. Alexander Nadas and Paul Zoll, Boston; and Drs. Charles A. Hufnagel and W. Proctor Harvey, Washington, D. C.

Members of The Medical Society of Virginia are invited to attend this symposium and further information may be obtained from the Heart Association of Northern Virginia, 609 North Edgewood Street, Arlington, Virginia.

Dr. George Margolis

Will join the faculty of the Medical College of Virginia as professor and chairman of the department of pathology on July 1st. He is now professor of pathology at Duke University and is a former chief consultant in that field to the Veterans Administration. He succeeeds Dr. Frank L. Apperly who retired last July.

Dr. C. Whitney Caulkins, Jr.,

Will direct the Waynesboro and East Augusta County's United Community Fund appeal this year.

Dr. Harold I. Nemuth

Has been named temporary chairman of the Department of Community Medicine at the Medical College of Virginia. He is replacing Dr. E. M. Holmes, Jr., until a permanent chairman is selected.

Dr. George S. Grier, III,

Has been elected president of the Newport News Rotary Club.

Virginia Association of Medical Assistants.

The third annual convention of this Association was held in Charlottesville, March 13-15. Members attended from Lynchburg, Petersburg, Falls Church, Loudoun County, Danville, and Richmond.

The Saturday session was presided over by the president, Mrs. Elva Spain of Petersburg. This was a business session with various committee reports, etc. An official pin, designed by Miss Sally Miller, Richmond, was adopted. A program of "Automobile Safety" was presented by Dr. Fletcher Woodward, Charlottesville. At the luncheon, the members were entertained by "Ber-Kee", the magician, from the Doho Chemical Company.

The following officers were elected at the afternoon session: President, Mrs. Mildred M. Phippen, Richmond; president-elect, Mrs. Lucy K. Carwile, Lynchburg; secretary, Miss Sally Miller, Richmond; and treasurer, Mrs. Shirley Tuck, Lynchburg. Mrs. Lillie Rogers, Richmond, installed the officers.

Following the banquet, Mr. Robert I. Howard, Executive Secretary of The Medical Society of Virginia, introduced the speaker, Miss Carol Towner, Special Services Representative of the Communications Division of the American Medical Association. Her topic was "Girl with a Life Preserver". Films of the American Association of Medical Assistants Convention taken by Mrs. Frances Mercer, Petersburg, were shown. A hospitality surprise party was given by the Richmond Club for the incoming president.

Dr. Abner Robertson, Richmond, and Dr. John Wyatt Davis, two of the Medical Advisors to the Association, also attended the convention.

Postgraduate Refresher Course in Honolulu.

The University of Southern California School of Medicine is again sponsoring a postgraduate refresher course in Honolulu. The group will depart from Los Angeles, via United Air Lines, July 29th and return on the S. S. Lurline on August 15th. The course is set up so that physicians may elect to attend one of several programs. In addition to lectures, there will be workshops in ECG and x-ray diagnosis as well as water and electrolyte balance and the diagnosis of jaundice. Emphasis is placed on practical diagnosis and therapy.

Afternoons, evenings and weekends are free so that the participating physicians and their families may enjoy the recreational facilities of the Island.

Further information may be obtained from Dr. Phil R. Manning, Associate Dean and Director of Postgraduate Division, School of Medicine, University of Southern California, 2025 Zonal Avenue, Los Angeles 33.

Wanted.

1. Male Psychiatrist, under 50 years, Diplomate or Board eligible, to direct privately operated outpatient clinic in city of 75,000. Salary—$16,200-$18,000 per annum and commission factor up to $7000.

2. Same prerequisites in location smaller area; guaranteed salary—$22,500-$25,000.

Write Box 625, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 20, Virginia. (*Adv.*)

General Surgeon,

Thirty-five years of age, family, Diplomate American Board of Surgery, general and gynecologic surgery, additional two years training extensive work in hand and maxillofacial surgery. Seeks association with a group or individual in greater Washington, Arlington or Alexandria. Other suitable Northern Virginia towns considered. Write Box 650, care the Monthly, 4205 Dover Road, Richmond 20, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Waller Curtis Akers,

Prominent physician of Stuart, died February 27th of a heart attack. Though he had been in ill health for some time, he continued his practice and had been at the office during the morning prior to his death. Dr. Akers was seventy-five years of age and graduated from the former University College of Medicine, Richmond, in 1912. Following his graduation, he located for practice in Stuart. Dr. Akers owned and operated the Stuart Hospital and had served for the past thirty-four years as head physician and surgeon. He was regarded as one of Patrick County's outstanding civic leaders and was active in church, civic, medical, fraternal and banking circles. He was a former Mayor and members of the Stuart Town Council and a charter member and past president of the Rotary Club. Dr. Akers was a past president of the Patrick-Henry Medical Society. He had been a member of The Medical Society of Virginia since 1912 and had served for many years as a member of the Council.

Dr. Akers is survived by his wife, two sons and a daughter.

Dr. William Ribble Pretlow,

Well-known physician of Warrenton, died March 28th. He was forty-nine years of age and a graduate of the Medical College of Virginia in 1934. Dr. Pretlow began his practice at The Plains but moved to Warrenton in 1936. He was a member of the Staff of the Fauquier Hospital. Dr. Pretlow had been an active member of The Medical Society of Virginia since 1936 and had served on several committees.

He is survived by his wife, a daughter, and four sons.

Dr. George Edward Barksdale,

Richmond, died March 6th at the home of his daughter near Fletcher, North Carolina. He was eighty-nine years of age and a graduate of the former University College of Medicine, Richmond, in 1899. Dr. Barksdale served as physician at Oteen Hospital, Asheville, N. C., for some years, and retired to Richmond in 1936 where he turned seriously to art, studying at and later becoming a fellow of the Pennsylvania Academy of Fine Arts. He was a painter of religious and historical subjects and his murals are in a number of churches in Virginia. He recently presented to the State of Virginia a life-size bronze of Edgar Allan Poe and this was dedicated in Richmond in April.

He was a Life Member of The Medical Society of Virginia, having joined in 1899.

His wife and two daughters survive him.

Dr. John Williams Hooker,

Chief Pathologist at Memorial Hospital, Danville, died April 2nd in Winston-Salem, where he had gone to deliver a lecture at the Bowman Gray School of Medicine. He was forty-four years of age and a graduate of Northwestern University Medical School, Chicago. Dr. Hooker came to Danville from Wisconsin in 1950 and had been very active in civic

and medical affairs. He had been a member of The Medical Society of Virginia since 1951. His wife and two sons survive him.

Dr. Whitmore.

Dr. William H. Whitmore died of coronary heart disease on January 30, 1959. He had been in failing health for some months and had been retired since August 31, 1958.

Dr. Whitmore was born and spent his early life in Lynchburg. He was educated in the public schools of that city and at the University of Virginia. He received his M.D. degree in 1916 from the University of Virginia.

He served first in the Army for approximately six months as a first lieutenant. He transferred to the Navy in January of 1917, in which organization he served during World War I. He was injured in action in 1918 and received the Purple Heart. He rose to the rank of Captain, and for some years, including those of World War II he served as the Roentgenologist at U.S. Naval Hospital, Portsmouth. He held many assignments from the Navy during his career. In 1938 he retired from the Navy and entered practice with Dr. C. W. Eley of Norfolk.

He was recalled to active duty November, 1940. After war duty in The Portsmouth Naval Hospital, he again was placed on inactive duty. He was appointed Radiologist at DePaul Hospital where he served until 1951. From then until his death he was in private practice. From 1955 to 1958 he was associated with Dr. P. B. Parsons of Norfolk.

Dr. Whitmore was a member of the Norfolk County Medical Society, The Medical Society of Virginia, the American Medical Association, the Radiological Society of North America, American Roentgen Ray Society, the Virginia Radiological Society, of which he was a past-president, and a Fellow of the American College of Radiology. Ht was a member of The Marshall Lodge #39, Lynchburg, A.M.W. Grand Lodge, Ancient Free Accepted Masons of Virginia, American Legion, Junius F. Lynch Post #35, Norfolk, and the American Camellia Society.

He made numerous contributions to the medical literature.

Dr. Whitmore is survived by his wife, two daughters, one son, William H. Whitmore, Jr., M.D., who is in the practice of medicine in Norfolk, and seven grandchildren.

WHEREAS, the Norfolk County Medical Society has lost a beloved member, whose ability and integrity were recognized by his associates in Radiology as well as his medical colleagues,

WHEREAS, the high degree of excellence which he exacted from his associates was none the less imposed upon himself,

WHEREAS, his quickness to champion a cause in which he believed, even if unpopular, and his readiness to accept defeat graciously were qualities which endeared him to his colleagues,

WHEREAS, the above facts are in brief, a summary of that member's life,

THEREFORE, be it resolved that these words become a part of the record of The Norfolk County Medical Society, and further, that copies of this resolution be sent to Mrs. Whitmore, the editor of the Journal of the American Medical Association, the editor of the American Journal of Radiology, Radium Therapy and Nuclear Medicine, and the editor of Radiology.

J. D. LEA, M.D.
J. W. OAST, M.D.
P. B. PARSON, M.D., *Chairman*

Dr. Natt.

Dr. Jerome Natt, well known doctor of general practice and member of this Society, died suddenly on February 22nd.

Dr. Natt was born March 19, 1907, in Brooklyn, N. Y. He received his undergraduate degree at Johns Hopkins University in 1928, and was graduated from the Long Island College of Medicine in 1933. He interned for two years at the Greenpoint Hospital in Brooklyn.

He began the general practice of medicine in Roanoke in 1935. He was a member of the staffs of the Lewis-Gale and the Roanoke Memorial Hospitals, and was also a member of the following medical societies: American Academy of General Practice, Virginia Academy of General Practice, The Medical Society of Virginia, Southwest Virginia Medical Society, Blue Ridge Chapter of the Virginia Academy of General Practice, and the Roanoke Academy of Medicine. He was a past member of the American Academy of Allergy.

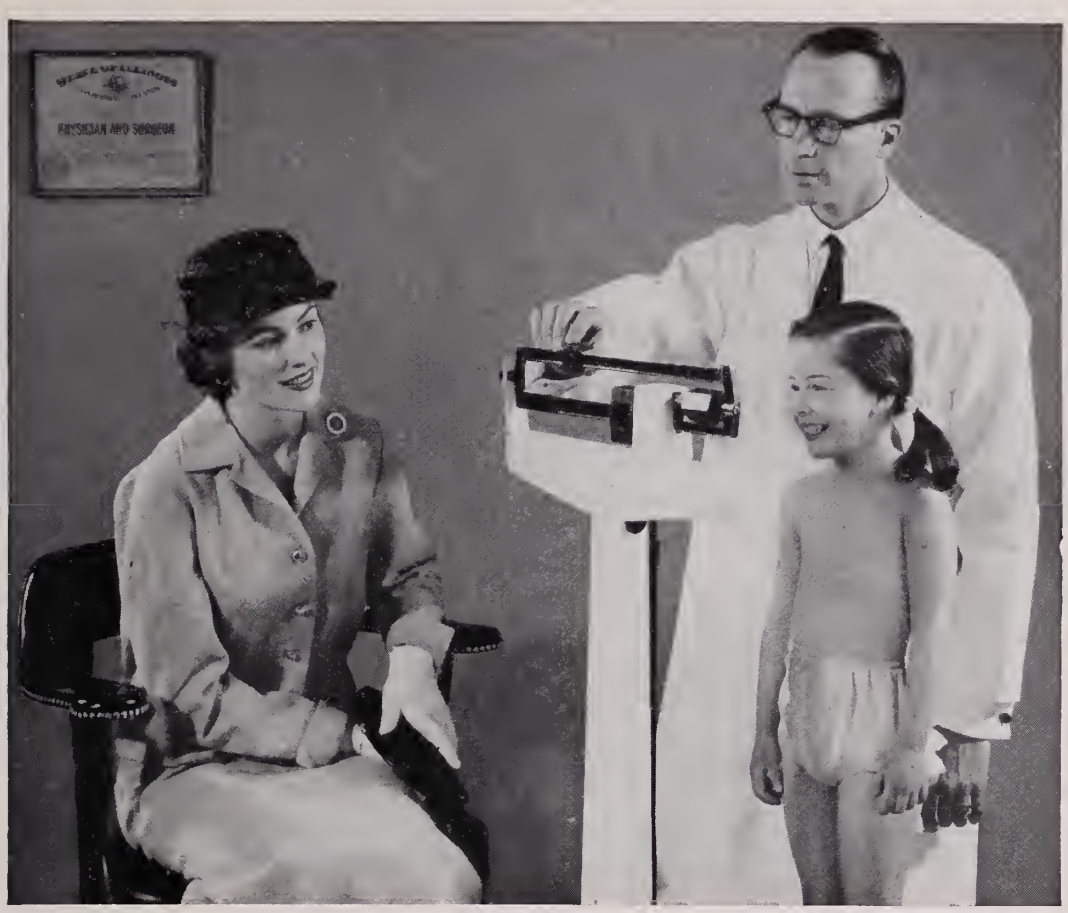
Dr. Natt was very active in a number of civic and community projects. Among these were: The Optimist Club, where he was Track Physician for the Soap Box Derby sponsored by this Club; former President of the Roanoke Council for Retarded Children; member of the Board of the Family Service Association; Commission Doctor for the State of Virginia Lunacy Commission for Roanoke; member of the Board of Directors of Temple Emanuel; Vice President of the Greenhill Country Club.

Dr. Natt was devoted to his family, and beloved by his many friends. He will be remembered as a man dedicated to his profession, and a humanitarian, especially in the field of retarded children.

THEREFORE BE IT RESOLVED, that the members of the Roanoke Academy of Medicine, extend their deepest and most sincere sympathy to the family of our departed colleague.

BE IT FURTHER RESOLVED, that this resolution be recorded in the minutes of the Roanoke Academy of Medicine, and copies sent to the family, and to the Virginia Medical Monthly.

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*Brown, S. S.; Libo, H. W., and Nussbaum, A. H.: Norethandralane in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

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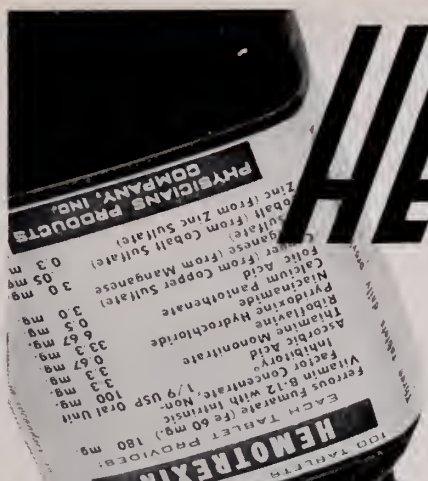
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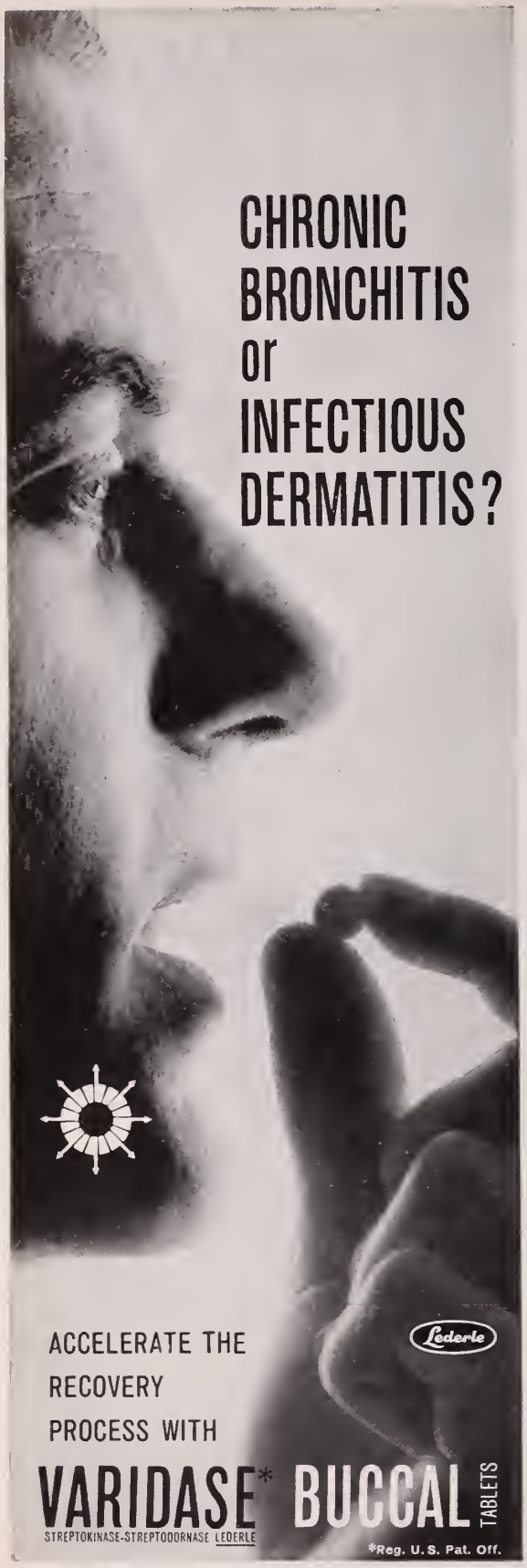
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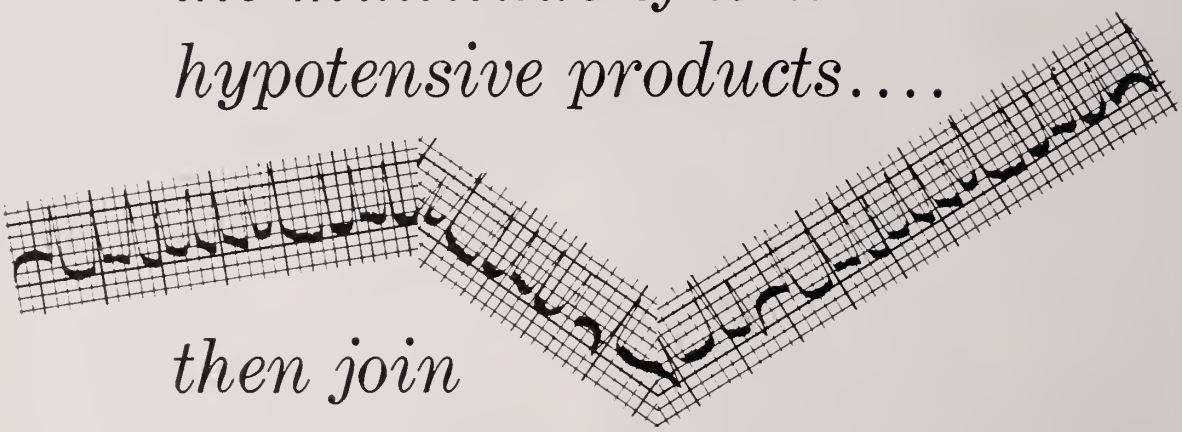
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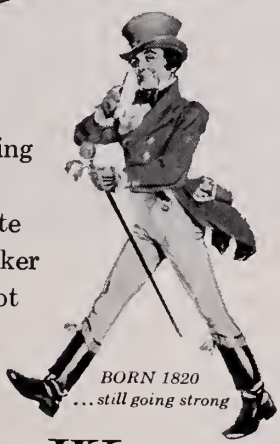
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AS AN AID FOR RELIEF OF BRONCHITIS • HAY FEVER ASTHMA FROM COLDS COUGHS • SINUSITIS

Used for over 31 years in California and recommended by many doctors on the West Coast. Inquiries may be referred to the Los Angeles County Medical Society, 1925 Wilshire Boulevard, Los Angeles 27, California



THE DESERT AIR LAMP

Offers proven relief from symptoms of these diseases by reducing the relative humidity and creating mild warm air in the sleep zone. Its dark burning safe lava cone unit allows infants and adults alike to breathe more easily.

Special discounts to the profession

For descriptive literature and price lists write

Jamestown Products Incorporated
2321 Riverside Drive
Danville, Virginia

With your HELP, DOCTOR, private enterprise can meet the health care insurance needs of our SENIOR CITIZENS...

We're trying to give our senior citizens (65 and over) a break. While their ability to pay may be limited and their insurability doubtful, their need for health care insurance is great. Don't you agree?

Who is to furnish such insurance? . . . The Social(ist) Security Schemers (as a big step toward Compulsory Health Insurance with Socialized Medicine as the other side of their coin) are asking for the chance. They claim private enterprise can't get the job done.

We are now offering applicants, 65 and older, a 125-day hospitalization policy (we don't think a short-stay coverage meets the older folks' needs), with a modest $200 maximum surgical fee schedule, at a price that should fit their budgets . . . $10.55 monthly for an aged couple . . . $6.70 for an individual.

We will be liberal in accepting risks, realizing most older applicants have acquired chronic impairments, *but* if we let down the bars to insure the *pending claims*, or the conditions almost *certain* to require *hospitalization* in *new risks* that have *not* been paying premiums right along, our hopes to do the job are doomed to failure.

Here's how we need your help

We'll ask, and we'll get, information about pre-existing illness and impairments, from each applicant. We'll get the name of his family doctor and a written authorization for that doctor to furnish us information as requested.

We'll consult *you*—by phone, where possible, so as to save you trouble—to get *your advice* as to whether, *in your opinion*, we can ignore the impairment as not particularly apt to require hospitalization. You may tell us, for example, "Sure, it's there, but if anything could have been done about it in a hospital, it would have been done. Ignore it; give them insurance."

Or you may say, "It wouldn't be fair to ask you to insure that condition. It is probably a pending claim. My medication and treatment isn't taking hold and I'm about ready to get them admitted for some studies. We may have to operate. Just don't tell them I said so."

Of course, your comments will be held in confidence by our underwriters and medical department. We won't let anyone drop other insurance either.

Will you recommend bad risks to help them get insured?

If you do . . . we are at your mercy . . . our plan would fail.

With your cooperation, however, we think *most* of our senior citizens can be insured, successfully. Please help us try. Thanks for reading this.

AMERICAN HEALTH INSURANCE CORP.
300 St. Paul Place, Baltimore 2, Md.



2½ minutes of your time reading about Trancopal may change your prescription habits when treating musculoskeletal and psychogenic disorders.

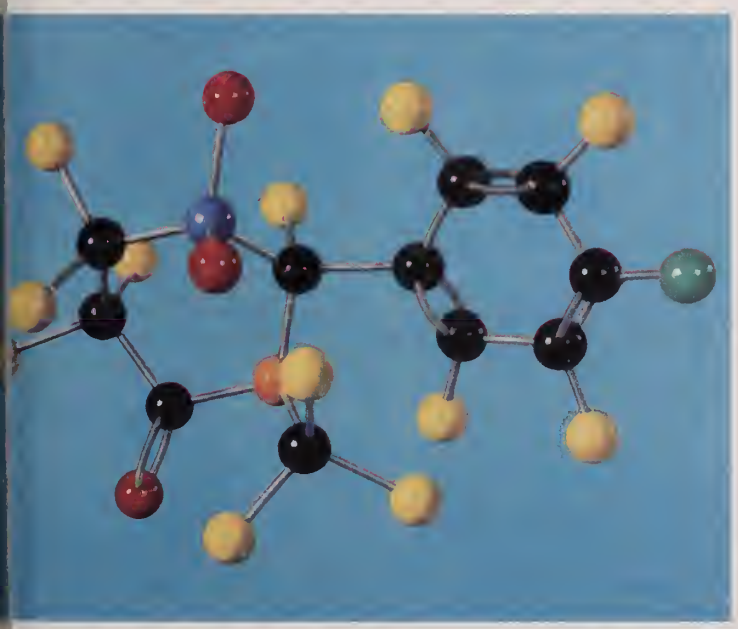
Trancopal®

*the first true tranquilaxant**

Potent MUSCLE RELAXANT

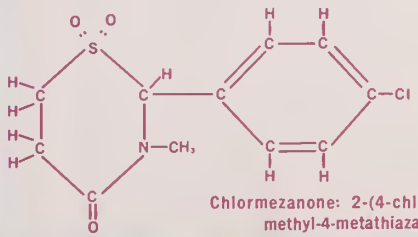
...Equally effective as a TRANQUILIZER

*** tran-qui-lax-ant** (tran'kwi-lak'sant) [< L. tranquillus, quiet; L. laxare, to loosen, as the muscles]



Trancopal, a major development of Winthrop research, is a new orally administered nonhypnotic central relaxant and tranquilizer. It relieves muscle spasm in a variety of musculoskeletal and neurologic conditions and also exerts a marked tranquilizing effect in anxiety and tension states.

Unrelated chemically to any other drug in current use, Trancopal offers a completely new major chemical contribution to therapeutics.



Chlormezanone: 2-(4-chlorophenyl)-3-methyl-4-metathiazanone-1-dioxide

Thoroughly evaluated clinically...

Clinical studies of 4092 patients by 105 physicians[1] have demonstrated that Trancopal often is effective when other drugs have failed. From these studies it is evident that Trancopal can provide more help for a greater number of tense, spastic, and/or emotionally upset patients than can any other chemotherapeutic agent in current use.

In musculoskeletal conditions[1]

effective in 91% of patients

INDICATIONS

- Low back pain (lumbago)
- Bursitis
- Osteoarthritis
- Fibrositis
- Myositis
- Postoperative myalgias
- Neck pain (torticollis)
- Rheumatoid arthritis
- Disk syndrome
- Joint disorders (ankle sprain, tennis elbow, etc.)

By relieving muscle spasm and pain, Trancopal permits early and active purposeful exercise and physical therapy to accomplish maximal benefits for rapid recovery.

Trancopal

Dosage: One Caplet (100 mg.) orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours.

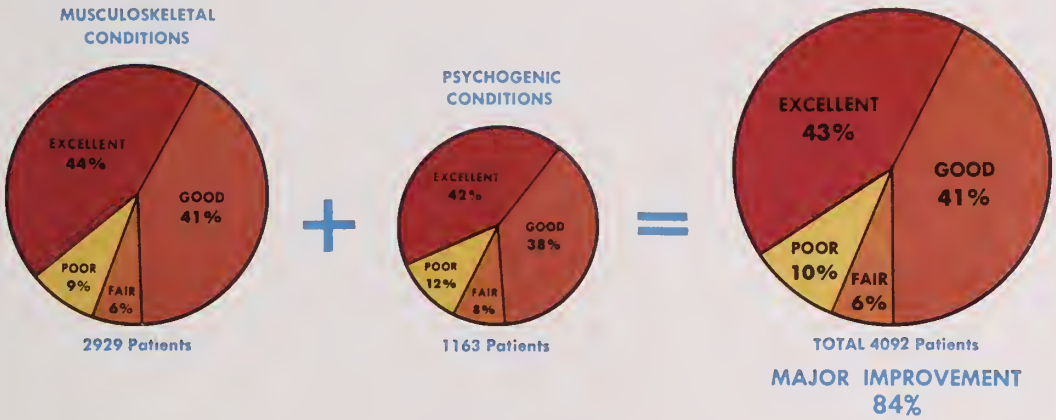
In anxiety and tension states[1]

effective in 88% of patients

INDICATIONS

Anxiety and tension states	Dysmenorrhea
Premenstrual tension	Asthma
Emphysema	Angina pectoris

Because of its exceptional calmative property, Trancopal "...allows the patient to use his energies in a more productive manner in overcoming his basic problem."[2]



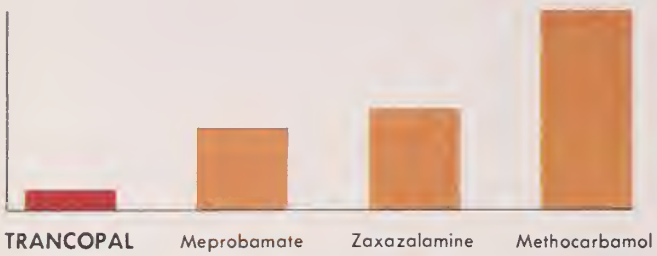
Of the total patients treated, Trancopal produced excellent results in 43 per cent, good results in 41 per cent, fair results in 6 per cent, and poor results in 10 per cent.

Better tolerated and safer than older drugs[3]

With Trancopal there is no clouding of consciousness, no euphoria or depression. Even in high dosage, there is no perceptible soporific effect. Because it does not irritate gastric mucosa, it can be taken without regard to mealtimes. Administration does not hamper work — or play. There are no known contraindications. Blood pressure, pulse rate, respiration and digestive processes are unaffected by therapeutic dosage.
Toxicity is extremely low. And Trancopal has a lower incidence of side effects than has zoxazolamine, methocarbamol or meprobamate.

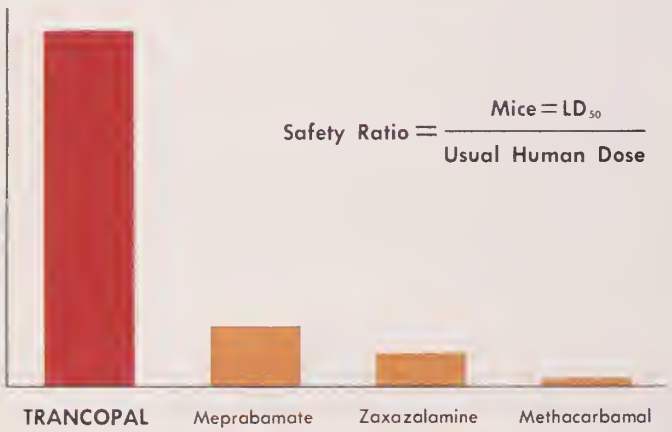
Comparison with 3 widely used central relaxants

When compared with three widely used central relaxants for activity, safety and clinical effectiveness. Trancopal offers definite desirable advantages.



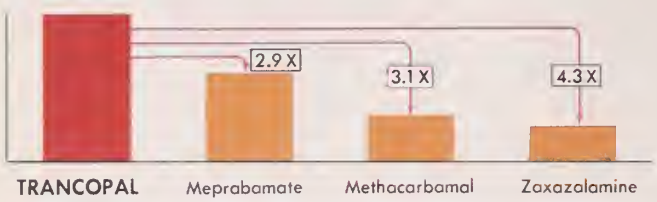
for activity

In the usual human dose, Trancopal is four to ten times as potent per milligram.



for safety

Comparative pharmacologic tests showed that Trancopal is up to thirteen times as safe or up to thirteen times less toxic. The measure of safety was the LD_{50} in mice/usual human dose.



for clinical effectiveness

A clinical comparison in low back pain, torticollis, bursitis and anxiety states showed that Trancopal is up to four times as effective. Each of the 40 patients received all four drugs in random rotation for several days. Although each of the four gave some relief, only the one providing the most effective relief was recorded.

Supplied: Trancopal Caplets® (scored) 100 mg., bottles of 100.

References: 1. Cooperative Study, Department of Medical Research, Winthrop Laboratories. · 2. Gans, S.E.: To be published. · 3. Lichtman, A.L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958.

the first true tranquilaxant

Trancopal

Potent
MUSCLE RELAXANT
...Equally effective as a
TRANQUILIZER

Winthrop Laboratories / New York 18, New York

Trancopal (brand of chlormezanone) and Caplets, trademarks reg. U. S. Pat. Off.

Printed in U. S. A. 3-59 (4027

Uneventful Recovery



the pattern of

GLUCOSAMINE-POTENTIATED TETRACYCLINE

therapy

COSA-TETRACYN*

capsules
125 mg., 250 mg.

oral suspension
orange flavored, 2 oz. bottle, 125 mg. per teaspoonful (5 cc.)

pediatric drops
orange flavored, 10 cc. bottle (with calibrated dropper), 5 mg. per drop (100 mg. per cc.)

Note: Rapid and high initial antibiotic blood levels are an important factor in uneventful recoveries. Glucosamine potentiation provides the fastest, highest tetracycline levels available with oral therapy. Bibliography and professional information booklet available on request.

Pfizer *Science for the world's well-being*

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

*Trademark for glucosamine-potentiated tetracycline



New

Neocurtasal

TASTES LIKE SALT

New Neocurtasal embodies the characteristic tang, grain and texture of regular table salt. Now whether food is seasoned by New Neocurtasal or salt — few patients detect the difference. Insipid dishes are rendered more palatable, tiresome diets less exacting.

When you must say "no salt," New Neocurtasal effectively cushions the blow. In selecting a most suitable replacement for salt, more and more physicians observe that New Neocurtasal assures close adherence to diet and the utmost in patient cooperation.

NEW **Neocurtasal**®

"An Excellent Salt Replacement"

—available in convenient 2 oz. shakers and 8 oz. bottles.



Contoins potossium chloride, potossium glutomate, glutamic acid, colcium silicate, potassium iodide (0.01%).

When Diuresis Is a "Must"—

SALYRGAN®-THEOPHYLLINE

Parenteral • Oral

Winthrop LABORATORIES • NEW YORK 18, N. Y.

Neocurtasal and Salyrgan (brand of mersalyl), trademarks reg. U.S. Pat. Off.



when pollen allergens attack the nose...

Triaminic provides more effective therapy in respiratory allergies because it combines two antihistamines[1,2] with a decongestant.

These antihistamines block the effect of histamine on the nasal and paranasal capillaries, preventing dilation and exudation.[3] *This is not enough;* by the time the physician is called on to provide relief, histamine damage is usually present and should be counteracted.

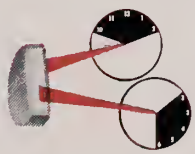
The decongestive action of orally active phenylpropanolamine helps contract the engorged capillaries, reducing congestion and bringing prompt relief from nasal stuffiness, rhinorrhea, sneezing and sinusitis.[4,5]

TRIAMINIC is orally administered, systemically distributed and reaches *all* respiratory membranes, avoiding nose drop addiction and rebound congestion.[6,7] TRIAMINIC can be prescribed for prompt relief in summer allergies, including hay fever.

References: 1. Sheldon, J. M.: Postgrad. Med. 14:465 (Dec.) 1953. 2. Hubbard, T. F. and Berger, A. J.: Annals Allergy p. 350 (May-June) 1950. 3. Kline, B. S.: J. Allergy 19:19 (Jan.) 1948. 4. Goodman, L. S. and Gilman, A.: Pharmacol. Basis Ther., Macmillan, New York, 1956, p. 532. 5. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 6. Lhotka, F. M.: Illinois M.J. 112:259 (Dec.) 1957. 7. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

Triaminic®

TRIAMINIC provides around-the-clock freedom from hay fever and other allergic respiratory symptoms with just one tablet q. 6-8 h. because of the special timed-release design.



Each TRIAMINIC timed-release tablet provides:
Phenylpropanolamine HCl.....50 mg.
Pheniramine maleate.....25 mg.
Pyrilamine maleate.....25 mg.

Also available: TRIAMINIC SYRUP for those patients of all ages who prefer a liquid medication. Each 5 ml. teaspoonful is equivalent to ¼ Triaminic Tablet or ½ Triaminic Juvelet. TRIAMINIC JUVELETS provide half the dosage of the Triaminic Tablet with the same timed-release action for prompt and prolonged relief.

STOP *running noses* *and open stuffed noses orally*

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska • Peterborough, Canada

A SPOON LICKIN' GOOD SULFA!



it's delicious cherry-flavored for children

KYNEX®

ACETYL PEDIATRIC SUSPENSION

N¹ Acetyl Sulfamethoxypyridazine Lederle

just 1 dose a day . . . achieves rapid therapeutic levels . . . sustained for 24 hours . . . extremely low incidence of sensitivity reactions and renal complications . . . convenient, highly economical . . .

ALWAYS ACCEPTABLE . . . WHENEVER SULFAS ARE INDICATED

Recommended dosage: first-day dose is 1 teaspoonful (250 mg.) for each 20 lbs. body weight up to 80 lbs. For each day thereafter, ½ teaspoonful for each 20 lbs. For 80 lbs. and over, use adult dosage of 4 teaspoonfuls (1.0 Gm.) initially, and 2 teaspoonfuls (0.5 Gm.) daily thereafter. Administer immediately after a meal.

Supplied: Each teaspoonful (5 cc.) contains 250 mg. of sulfamethoxypyridazine activity. Bottles of 4 and 16 fl. oz.

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

re-evaluating tranquilizers?

READ WHAT CLINICIANS ARE NOW SAYING ABOUT ATARAX®

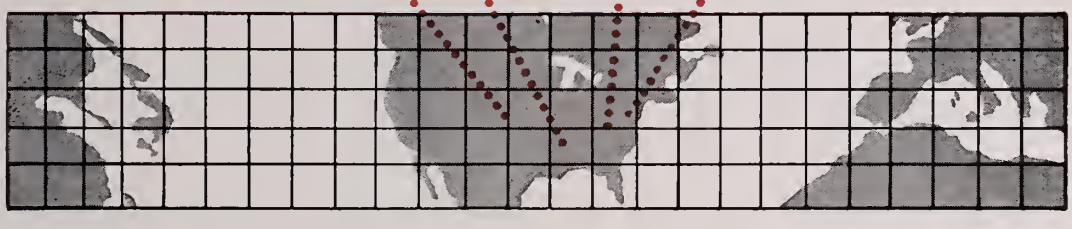
(brand of hydroxyzine)

IN GERIATRICS
"ability to decide correctly has increased, while the illogical response to anxiety has diminished."[1]

IN WORKING ADULTS
"especially well suited for ambulatory patients who must work, drive a car, or operate machinery."[3]

IN PEDIATRICS
"ATARAX appeared to reduce anxiety and restlessness, improve sleep patterns and make the child more amenable to the development of new patterns of behavior...."[2]

IN GENERAL
ATARAX is "effective in controlling tension and anxiety.... Its safety makes it an excellent drug for out-patient use in office practice."[4]



INVESTIGATORS AGREE ON OPTIMAL ATARAX DOSAGES

For childhood behavior disorders	10 mg. tablets	3-6 years, one tablet t.i.d. over 6 years, two tablets t.i.d.
	Syrup	3-6 years, one tsp. t.i.d. over 6 years, two tsp. t.i.d.
For adult tension and anxiety	25 mg. tablets	one tablet q.i.d.
	Syrup	one tbsp. q.i.d.
For severe emotional disturbances	100 mg. tablets	one tablet t.i.d.
For adult psychiatric and emotional emergencies	Parenteral Solution	25-50 mg. (1-2 cc.) intramuscularly, 3-4 times daily, at 4-hour intervals. Dosage for children under 12 not established.

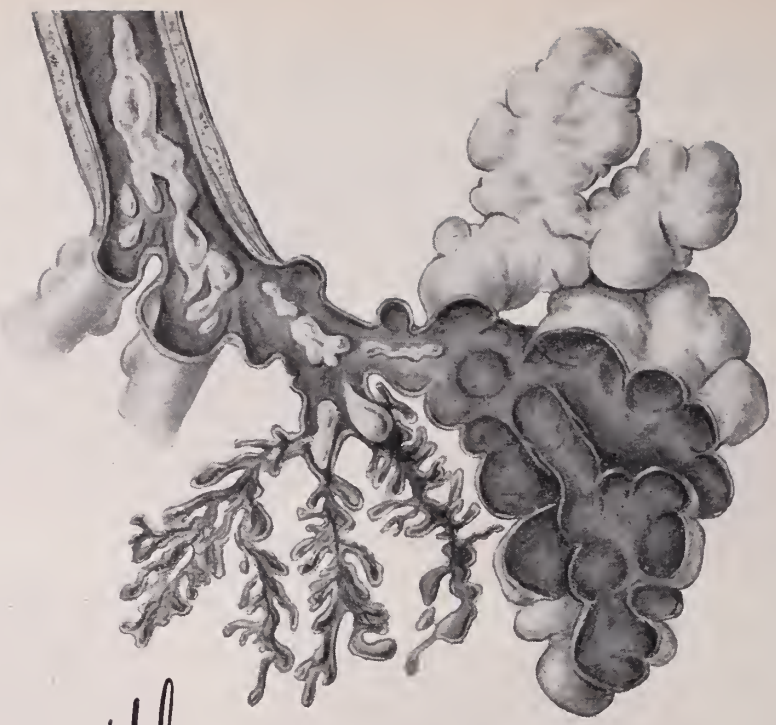
Supplied: Tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Smigel, J. O., et al.: J. Am. Ger. Soc., in press. 2. Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958. 3. Ayd, F. J., Jr.: New York J. Med. 57:1742 (May 15) 1957. 4. Menger, H. C.: New York J. Med. 58:1684 (May 15) 1958. 5. Coirault, M., et al.: Presse méd. 64:2239 (Dec. 26) 1956. 6. Bayart, J.: Presented at the International Congress of Pediatrics, Copenhagen, Denmark, July 22-27, 1956.

ATARAX

Pfizer Rx

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being



Clear the air

with ALEVAIRE®

inhalation therapy

WETS, THINS, LOOSENS PULMONARY SECRETIONS

Very useful in...

... BRONCHITIS
BRONCHIAL ASTHMA
BRONCHIECTASIS
PERTUSSIS
CROUP



Alevaire is administered by means of a nebulizer operated with an air compressor or oxygen.

Supplied in bottles of 60 cc. for intermittent and 500 cc. for continuous nebulization.

Winthrop LABORATORIES
NEW YORK 18, N. Y.

Alevaire, trademark reg. U.S. Pat. Off.



. . . and one to grow on

A tiny tablet of REDISOL to stimulate the appetite — to help in the intake of food for growth.

REDISOL is crystalline vitamin B_{12}, an essential vitamin for growth and the fundamental metabolic processes.

Ideal for the growing child, the REDISOL tablet dissolves instantly on contact in the mouth, on food or in liquids.

Packaged in bottles hermetically sealed to keep the moisture out and to retain vitamin potency in 25 and 50 mcg. strengths, bottles of 36 and 100 — in 100 mcg. strength, bottles of 36, and in 250 mcg. strength, vials of 12.

Also available as a pleasant-tasting cherry-flavored elixir (5 mcg. per 5-cc. teaspoonful) and as REDISOL injectable, cyanocobalamin injection USP (30 and 100 mcg. per cc., 10-cc. vials and 1000 mcg. per cc. in 1, 5 and 10-cc. vials).

REDISOL®

cyanocobalamin, Crystalline Vitamin B_{12}

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

REDISOL IS A TRADEMARK OF MERCK & CO., INC.

HIGHLIGHTS FROM THE A.M.A. COUNCIL ON DRUGS

REPORT ON TRIAMCINOLONE

J.A.M.A. 169:257 (January 17) 1959.

"It [triamcinolone] has an anti-inflammatory potency greater than an equal amount of prednisolone; i.e., comparable suppressive effects may usually be achieved with lower doses of triamcinolone than with prednisolone."

"Triamcinolone lacks the sodium-retaining and edema-producing effects of most other glucocorticoids. During the first several days of administration, it may cause a loss of sodium from the body; an initial mild diuretic action is frequently observed, whether the patient is frankly edematous or not. This is in contrast to the definite sodium-retaining and fluid-retaining properties of cortisone and hydrocortisone and to a much lesser extent with prednisone and prednisolone."

"Except in exceedingly large doses, triamcinolone apparently has no consistent effect on potassium excretion. Hence, neither sodium restriction nor potassium supplementation is ordinarily required during therapy with this agent."

"As with other glucocorticoids, the long-term administration of triamcinolone results in definite catabolic effects, as indicated by impairment of carbohydrate utilization and negative protein and calcium balance. This catabolic effect, coupled with a lack of appetite stimulation which is apparently peculiar to triamcinolone, may produce weight loss that might be undesirable in some patients treated for long periods of time."

"...the voracious appetite, with weight gain and euphoria, characteristic of other steroids, is not seen with administration of triamcinolone."

"Triamcinolone has been used for the management of a wide variety of clinical conditions usually considered amenable to systemic steroid therapy. These have included rheumatoid arthritis and other collagen diseases, allergic and dermatological disorders, certain leukemias and malignant lymphomas, the nephrotic syndrome, pulmonary emphysema and fibrosis, acute bursitis, rheumatic fever, and certain blood dyscrasias. Although clinical experience with the drug in some of the foregoing conditions is not extensive, the many similarities in action between triamcinolone and other potent glucocorticoids would indicate a usefulness for triamcinolone akin to that of other agents of this class."

"There is some evidence that triamcinolone is more effective at a smaller dosage than are other steroids in controlling both the skin and joint lesions in psoriasis, whether or not complicated by arthropathy."

"Triamcinolone appears to compare favorably with other steroids for use in those situations in which edema and sodium retention have been complicating problems."

"It [triamcinolone] may also be the steroid of choice for patients in whom psychic stimulation, euphoria, voracious appetite, and weight gain should be avoided."

"...the drug [triamcinolone] does produce the other side effects and untoward reactions common to the glucocorticoids. At therapeutically equivalent doses, the frequency and severity of clinical manifestations of hyperadrenalism — rounding of the face, fat deposition, and hirsutism — are essentially the same. Likewise, there is little indication that the relative incidence of osteoporosis is materially decreased after the long-term use of the drug."

"Triamcinolone apparently does not cause the euphoria sometimes seen with other steroids, and the occurrence of mental depressions is uncommon."

"Current evidence suggests that the drug [triamcinolone] may not produce as high an incidence of peptic ulcer as do other steroids."

"Cutaneous erythema seems to be a side effect peculiar to triamcinolone."

"The usual contraindications and precautions of glucocorticoid therapy should be followed in the use of triamcinolone, keeping in mind that prolonged therapy with this drug will suppress the function of the patient's own adrenals by interfering with the pituitary-adrenal axis."

Aristocort®

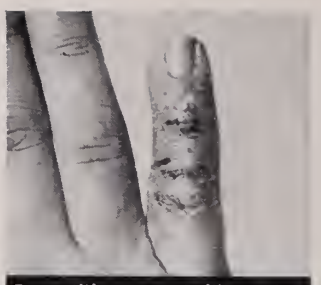
Triamcinolone LEDERLE

Supplied: 1 mg. scored tablets (yellow)
2 mg. scored tablets (pink)
4 mg. scored tablets (white)

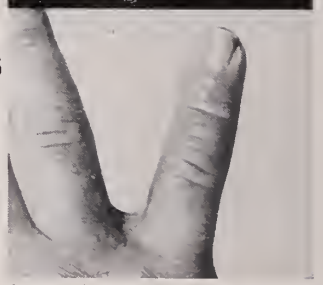
Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

new for total management of itching,[1,2] inflamed,[3,4] infected[5,6] skin lesions



Dermatitis repens [with staph and monilia] 7 weeks duration

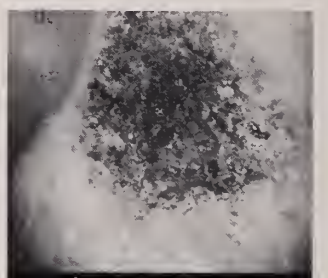


Cleared in 5 days

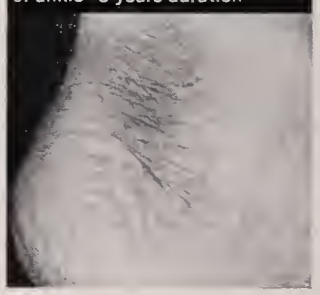
Mycolog ointment

Kenalog, Spectrocin and Mycostatin in Plastibase

antipruritic/anti-inflammatory/antibacterial/antifungal



Infectious eczematoid dermatitis of ankle—5 years duration



Cleared in 20 days

Mycolog Ointment — containing the new superior topical corticoid Kenalog — reduces inflammation,[3,4] relieves itching,[1,2] and combats or prevents bacterial, monilial and mixed infections.[5-7] It is extremely well tolerated, and assures a rapid, decisive clinical response for most infected dermatoses.

> "Thirty-one of 38 patients . . . obtained excellent or good control of dermatological lesions . . . [Mycolog] was highly effective, particularly in the management of mixed infections. Several recalcitrant eruptions which had not responded to previous therapy were remarkably responsive to the daily application of this preparation over periods of 2 to 3 weeks."[5]

For total management of itching, inflamed, infected skin lesions, Mycolog contains triamcinolone acetonide, an outstanding new topical corticoid for prompt, effective relief of itching, burning and inflammation[1-4] — neomycin and gramicidin for powerful antibacterial action[7] — and nystatin for treating or preventing Candida (Monilia) albicans infections.[8,9]

Application: Apply 2 to 3 times daily. Supply: 5 Gm. and 15 Gm. tubes. Each gram supplies 1.0 mg. (0.1%) triamcinolone acetonide, 2.5 mg. neomycin base, 0.25 mg. gramicidin, and 100,000 units nystatin in PLASTIBASE.

References: 1. Shelmire, J.B., Jr.: Monographs on Therapy 3:164 (Nov.) 1958. · 2. Nix, T.E., Jr., and Oerbes, V.J.: Monographs on Therapy 3:123 (Nov.) 1958. · 3. Robinson, R.C.V. Bull. School of Med., U. Maryland 43:54 (July) 1958. · 4. Sternberg, T.H. Newcomer, V.D., and Reisner, R.M. Monographs on Therapy 3:115 (Nov.) 1958. · 5. Clark, R.F., and Hallett, J.J.: Monographs on Therapy, 3:153 (Nov.) 1958. · 6. Smith J.G., Jr.; Zawisza, R.J., and Blank, H.: Monographs on Therapy, 3:111 (Nov.) 1958. · 7. Monographs on Therapy, 3:137 (Nov.) 1958. · 8. Howell, C.M., Jr.: North Carolina M.J. 19:449 (Oct.) 1958. · 9. Bereston, E.S.: South. M.J. 50:547 (April) 1957.

And whatever the topical corticoid need, a suitable Squibb formulation is available—Kenalog-S Lotion—7½ cc. plastic squeeze bottles. Each cc. supplies 1.0 mg. (0.1%) triamcinolone acetonide, 2.5 mg. neomycin base and 0.25 mg. gramicidin. Kenalog Cream, 0.1%—5 Gm. and 15 Gm. tubes. Kenalog Lotion, 0.1%—15 cc. plastic squeeze bottles. Kenalog Ointment, 0.1%—5 Gm. and 15 Gm. tubes.

SQUIBB

Squibb Quality — the Priceless Ingredient

"SPECTROCIN"®, "MYCOSTATIN"®, "PLASTIBASE"®, "MYCOLOG" AND "KENALOG" ARE SQUIBB TRADEMARKS

"It is concluded that the addition of buffering agents to acetylsalicylic acid in the concentrations used serves no clinically detectable useful purpose."[1]

[1]Sadove, Max S. and Schwartz, Lester: An Evaluation of Buffered Versus Nonbuffered Acetylsalicylic Acid, Postgraduate Medicine; 24:183, August, 1958.

Nonbuffered Material Used—Bayer® Aspirin.

For every topical indication, a Burroughs Wellcome 'SPORIN'...



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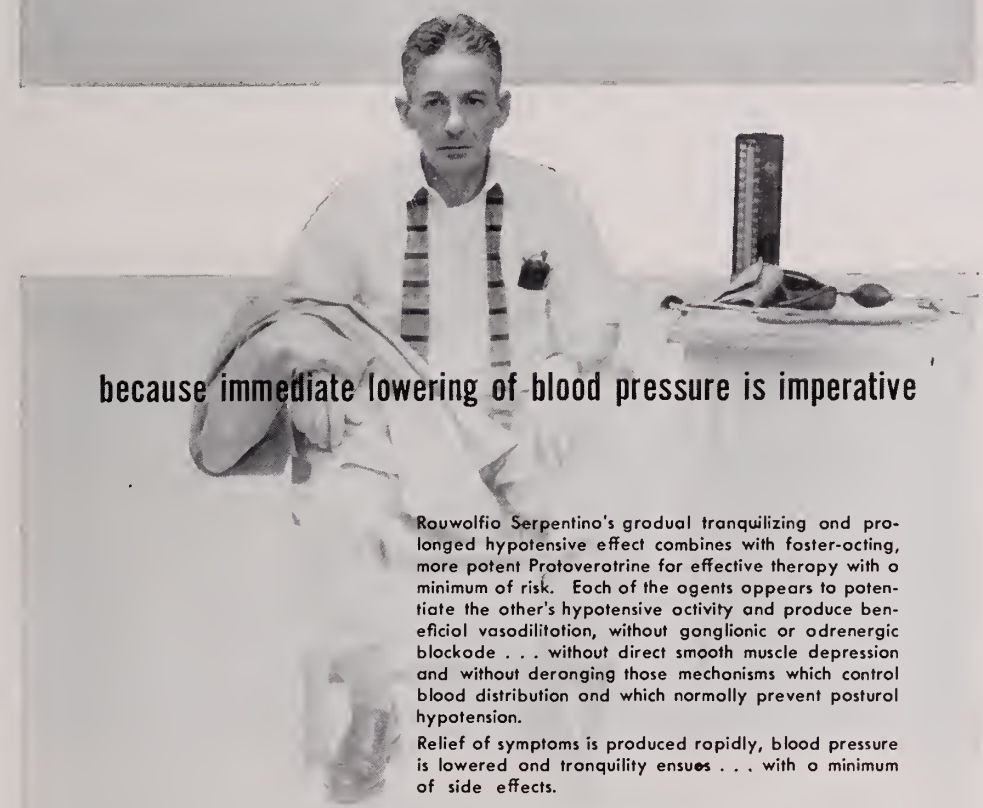
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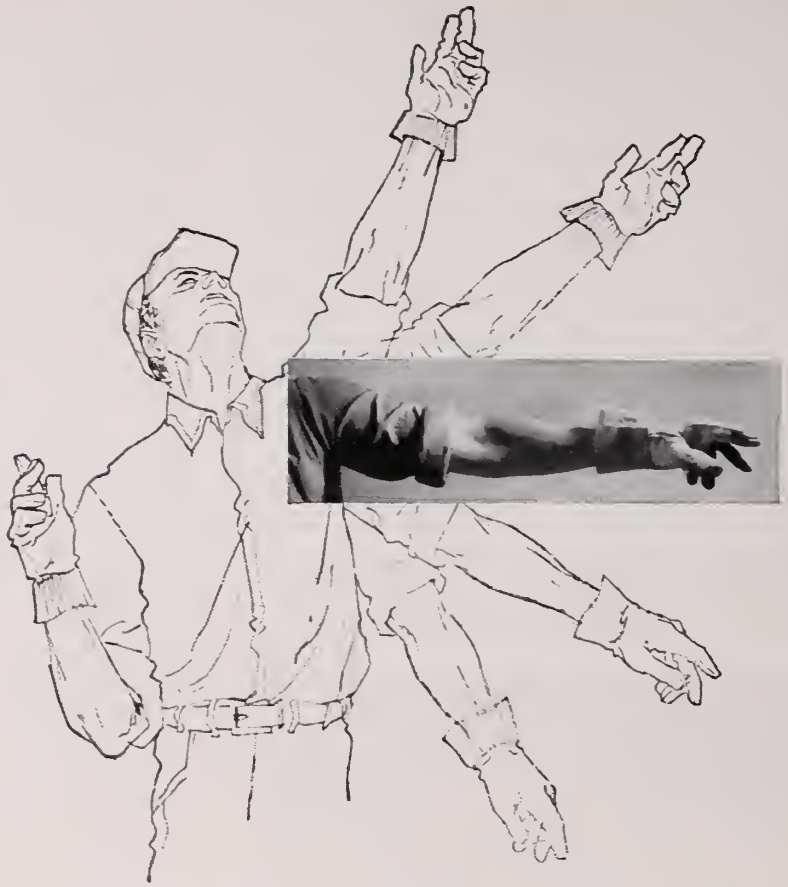
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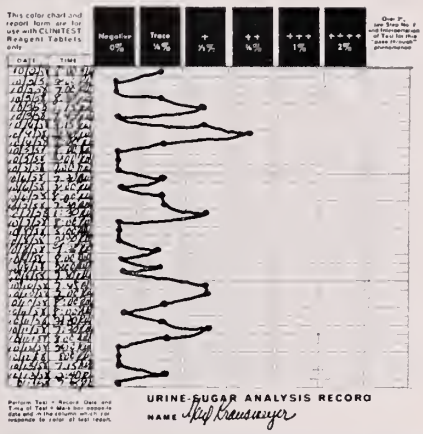
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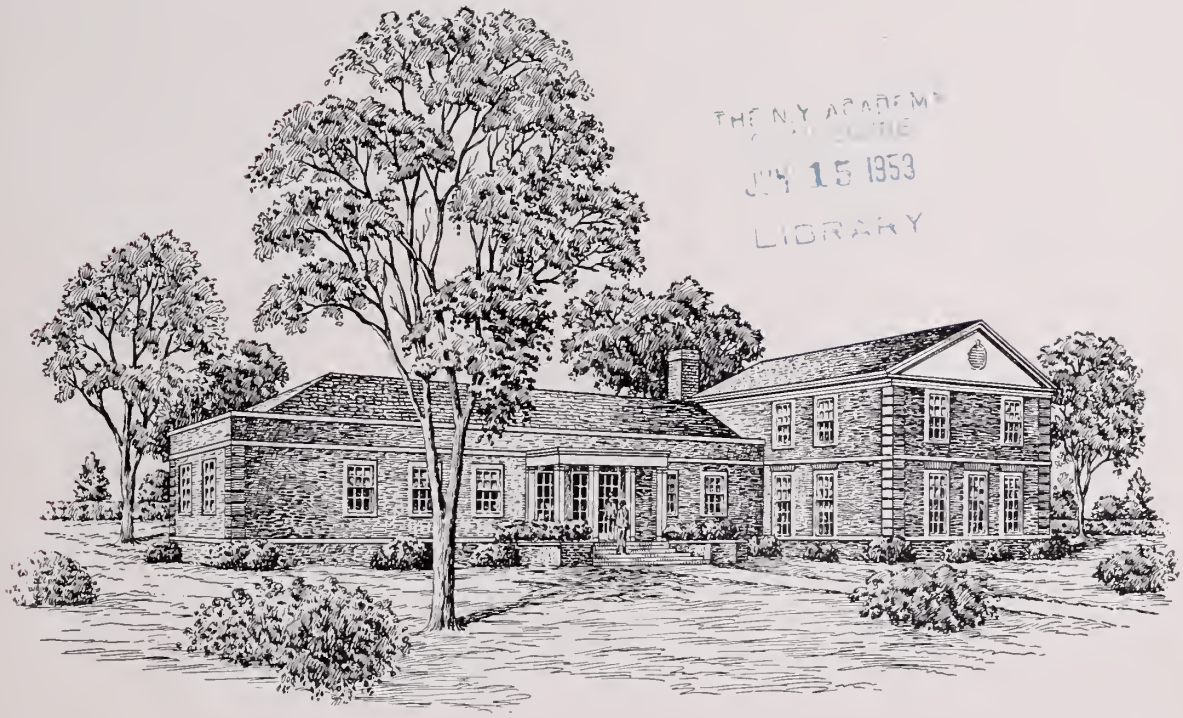
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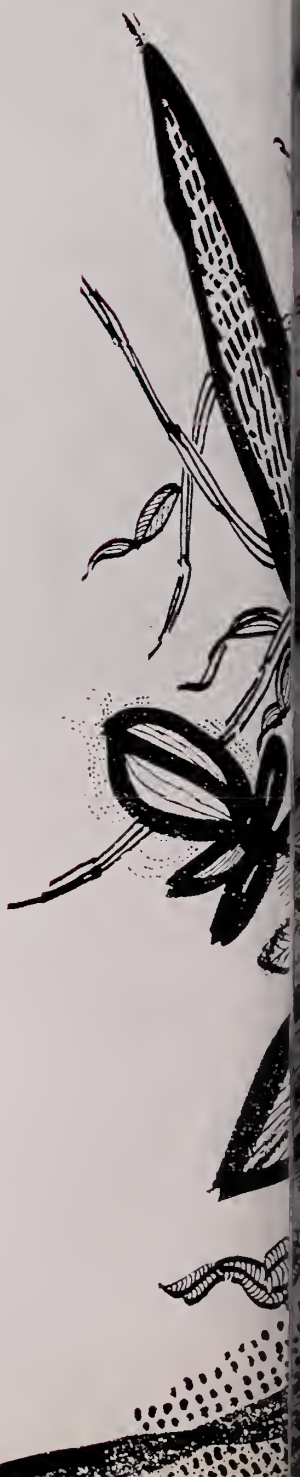
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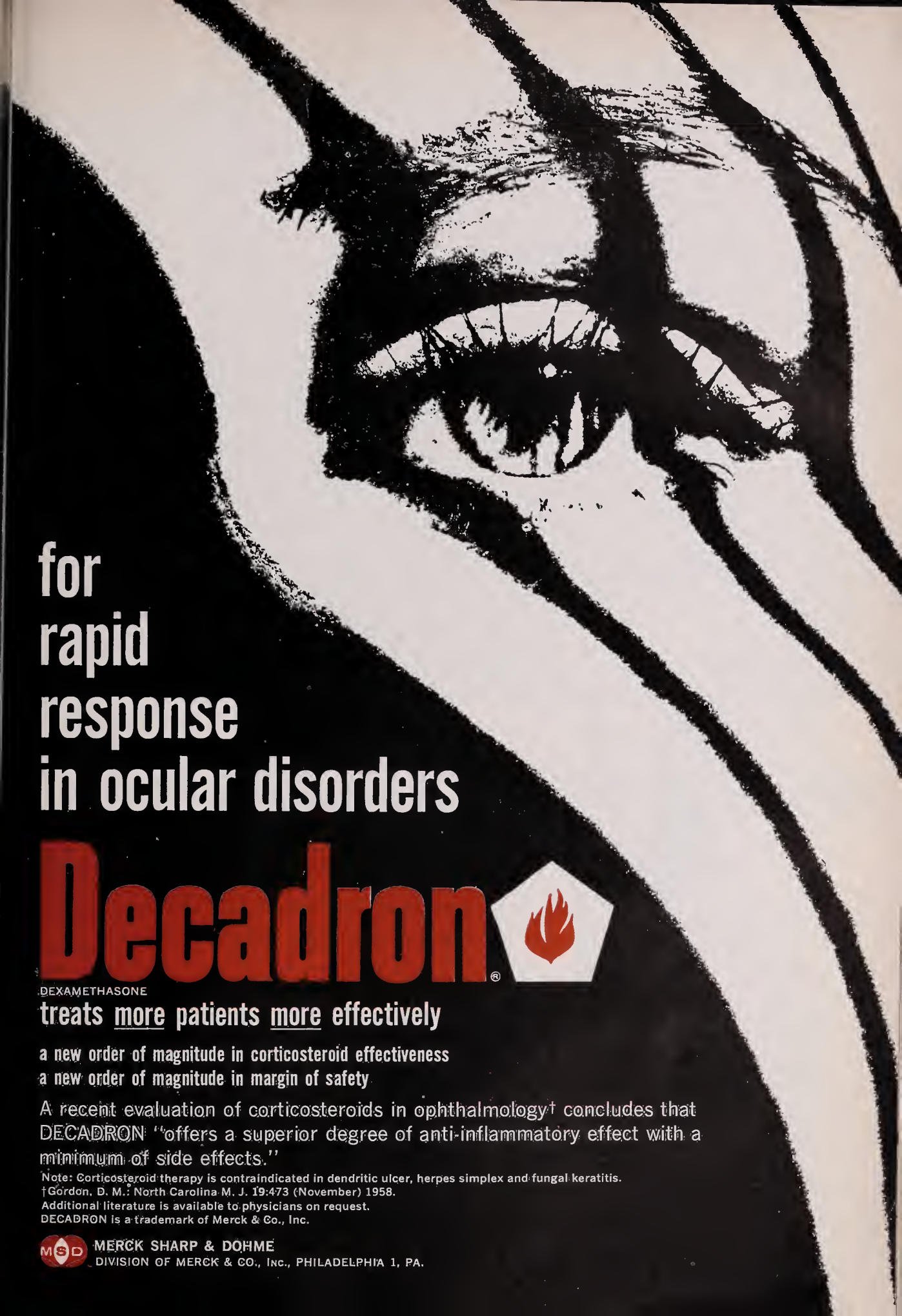
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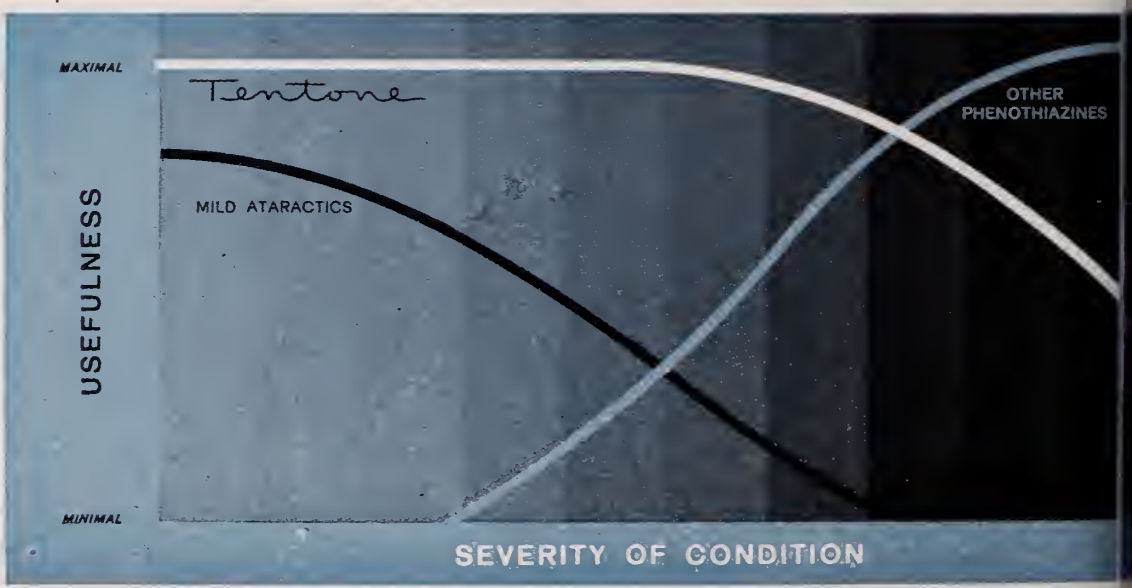
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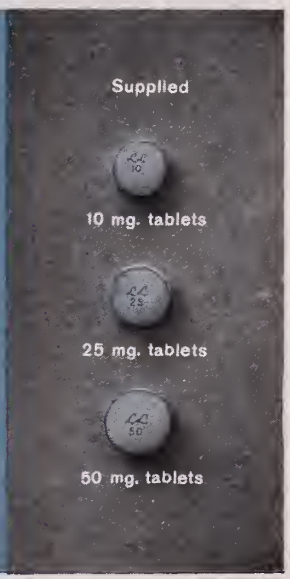
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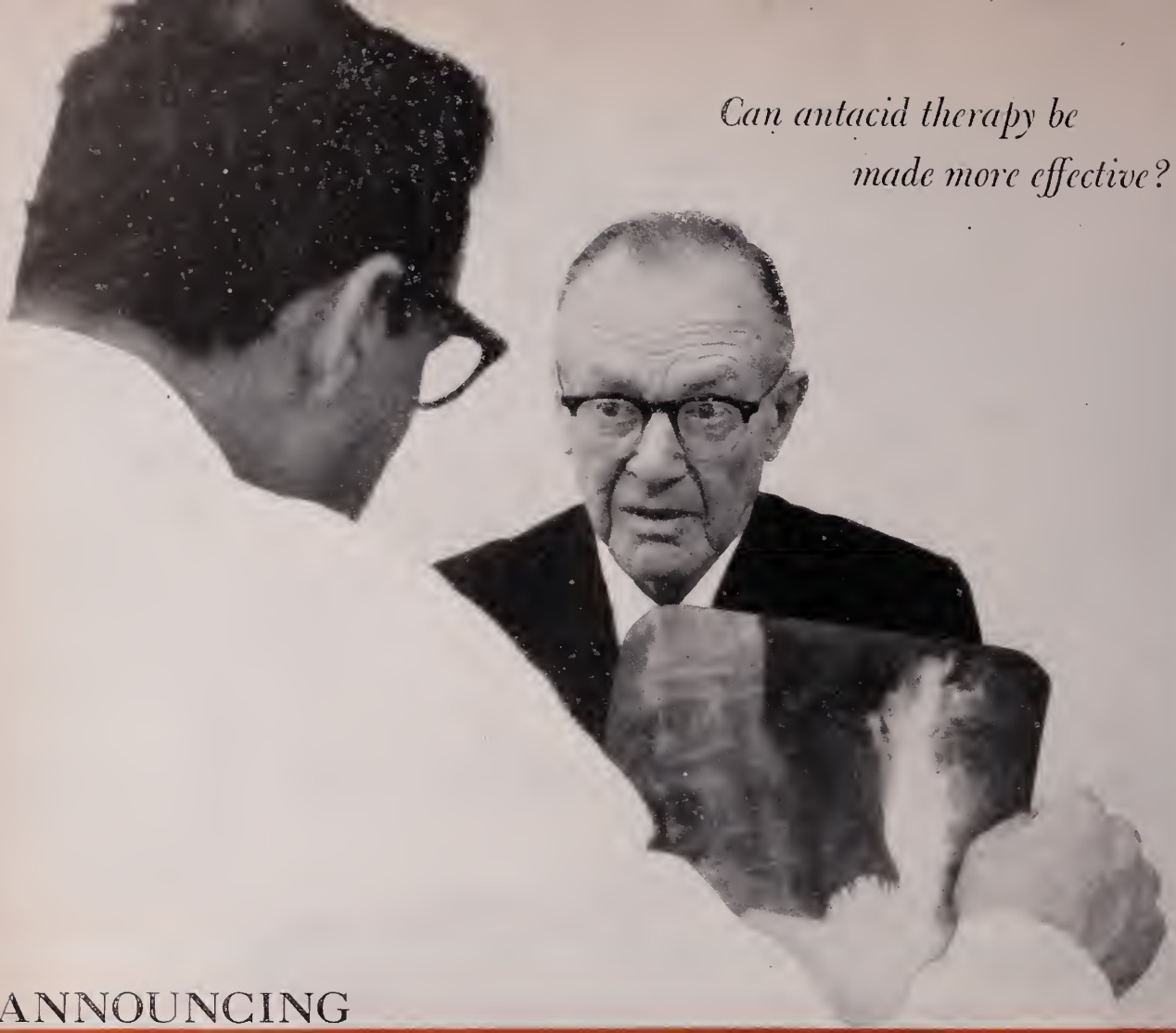
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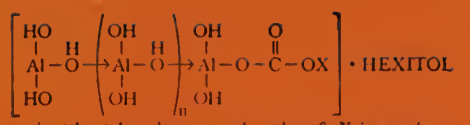
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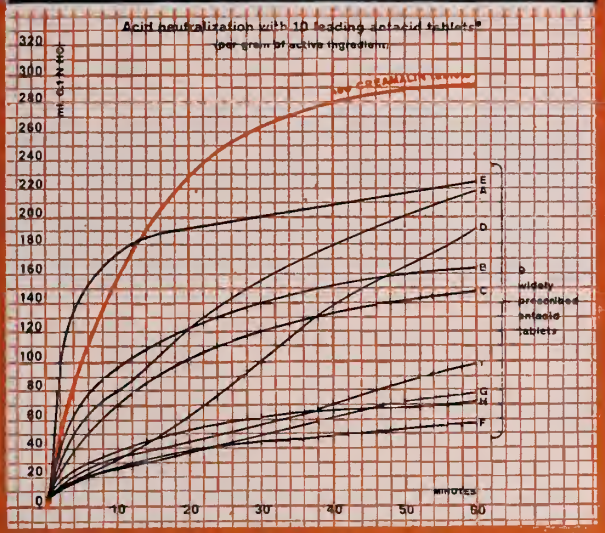
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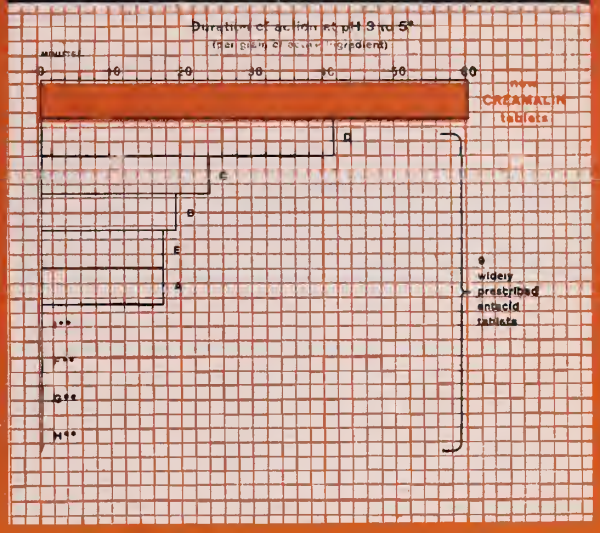
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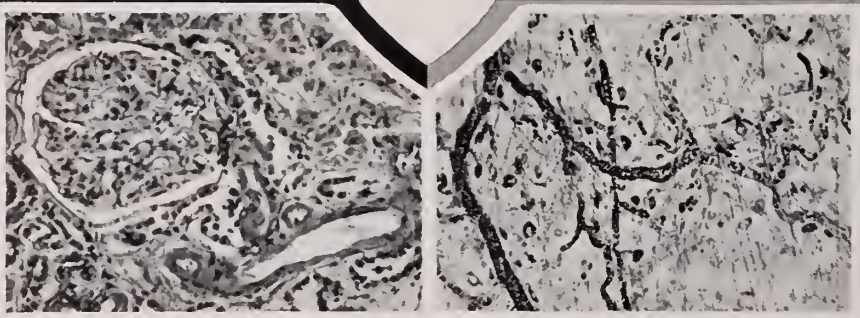
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Supply: Capsule-shaped tablets supplying 50 mg. of Raudixin, 400 mg. of flumethiazide, and 400 mg. of potassium chloride, bottles of 100.

References: 1. Moyer, J. H., and others: Am. J. Cardiol., 3:113 (Jan.) 1959. • 2. Bodi, T., and others: To be published, Am. J. Cardiol., (April) 1959. • 3. Fuchs, M., and others: Monographs on Therapy, 4:43 (April) 1959. • 4. Montero, A. C.; Rochelle, J. B., III, and Ford, R. V.: To be published. • 5. Rochelle, J. B., III; Montero, A. C., and Ford, R. V.: To be published.

LITERATURE AVAILABLE ON REQUEST.

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(1) Ernst, E. M., and Snyder, A. M.: Pennsylvania M. J. *61*:355, 1958.

(2) Preisig, R., and Landman, M. E.: Am. Pract. & Digest Treat. *9*:740, 1958.

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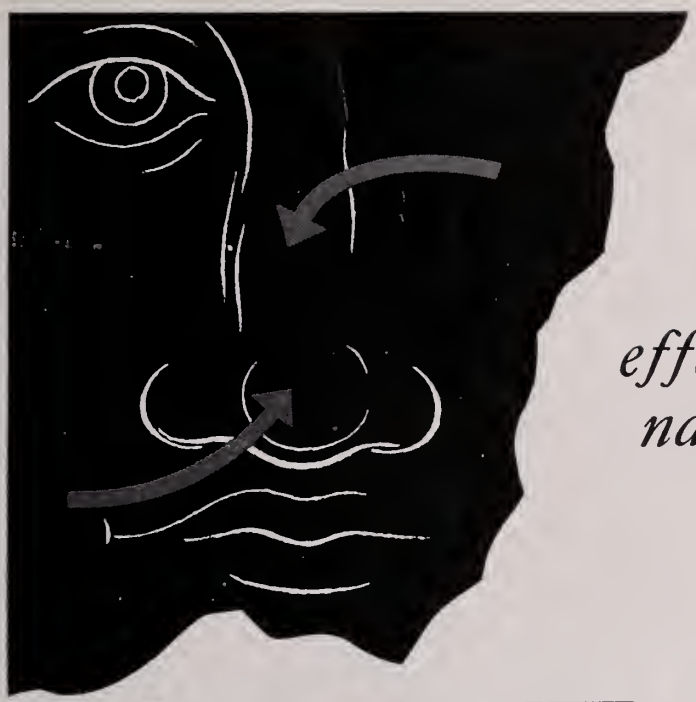
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Dose: Initial — 400 to 600 mg. (2 or 3 tablets) daily.
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PDR
PAGE 825

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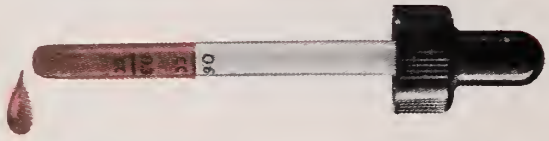
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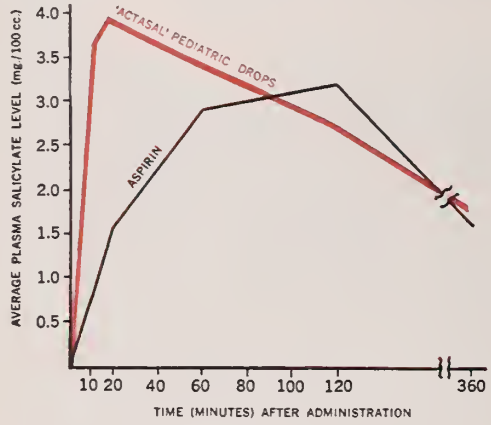
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SUPPLY: 60 cc. bottle packaged with cellophane-wrapped calibrated dropper.

CITED REFERENCES: 1. Smith, P. K.: Personal Communication. 2. Wolf, J., Aboody, R.: Federation Proc. 18:605, 1959. 3. Broh-Kahn, R. H.: Federation Proc. 18:17, 1959. 4. Complete data available on request to the Medical Director.

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Bialkin, G.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959.

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Bialkin, G.: A New Anti-Seborrheic Agent in Pediatric Practice. Arch. of Ped. (to be published).

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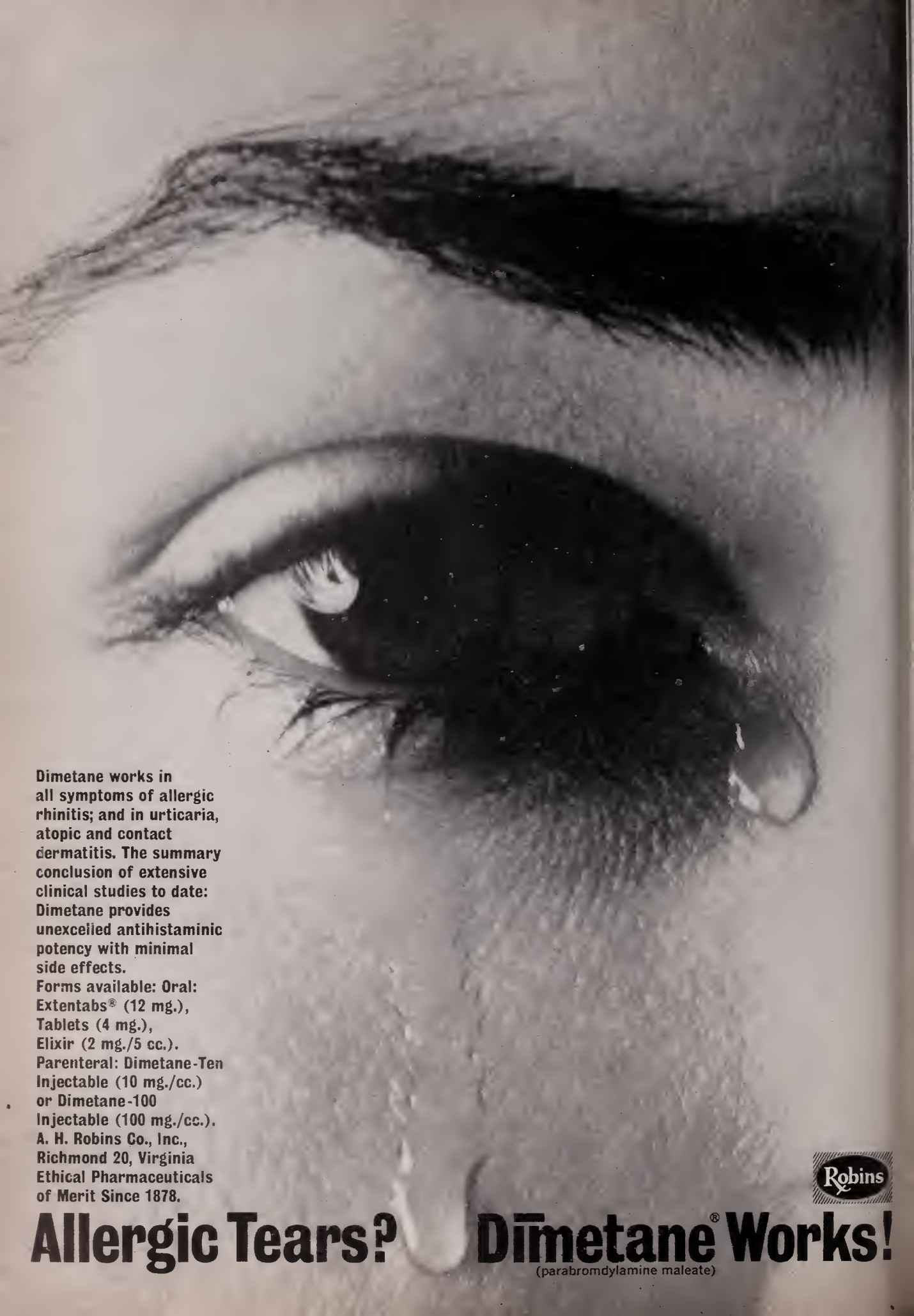
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*Editorial: New England J. Med. 260:246 (Jan. 29) 1959

Precautions: Fluid balance should be restored in dehydrated infants or those with oliguria before beginning treatment with Skopyl. **Indications:** Colic (paroxysmal fussing, infantile dyspepsia, irritable crying), infantile vomiting, infantile diarrhea, pyloric spasm. **Available:** 5 cc. dropper bottle. One drop=0.6 mg.; 40 drops=1 cc. **Pharmacia Laboratories, Inc.,** 501 Fifth Avenue, New York 17, N.Y.



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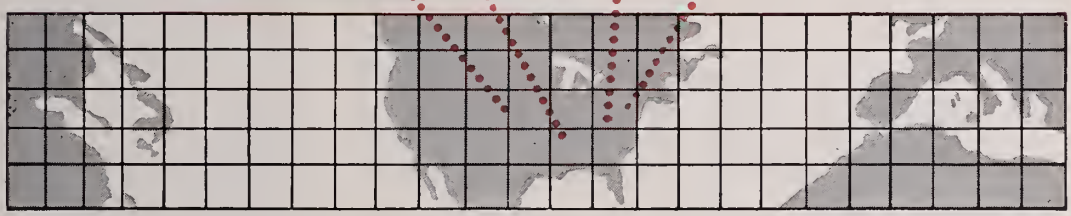
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ATARAX is "effective in controlling tension and anxiety.... Its safety makes it an excellent drug for out-patient use in office practice."[4]



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Supplied: Tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Smigel, J. O., et al.: J. Am. Ger. Soc., in press. 2. Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958. 3. Ayd, F. J., Jr.: New York J. Med. 57:1742 (May 15) 1957. 4. Menger, H. C.: New York J. Med. 58:1684 (May 15) 1958. 5. Coirault, M., et al.: Presse méd. 64:2239 (Dec. 26) 1956. 6. Bayart, J.: Presented at the International Congress of Pediatrics, Copenhagen, Denmark, July 22-27, 1956.

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new for total management of itching,[1,2] inflamed,[3,4] infected[5,6] skin lesions

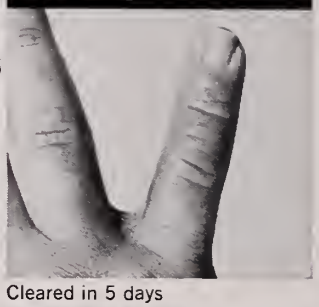
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Cleared in 5 days



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References: 1. Shelmire, J.B., Jr.: Monographs on Therapy 3:164 (Nov.) 1958. • 2. Nix, T.E., Jr., and Derbes, V.J.: Monographs on Therapy 3:123 (Nov.) 1958. • 3. Robinson, R.C.V.: Bull. School of Med., U. Maryland 43:54 (July) 1958. • 4. Sternberg, T.H.: Newcomer, V.D., and Reisner, R.M.: Monographs on Therapy 3:115 (Nov.) 1958. • 5. Clark, R.F., and Hallett, J.J.: Monographs on Therapy, 3:153 (Nov.) 1958. • 6. Smith J.G., Jr.; Zawisza, R.J., and Blank, H.: Monographs on Therapy, 3:111 (Nov.) 1958. • 7. Monographs on Therapy, 3:137 (Nov.) 1958. • 8. Howell, C.M., Jr.: North Carolina M.J. 19:449 (Oct.) 1958. • 9. Bereston, E.S.: South. M.J. 50:547 (April) 1957.

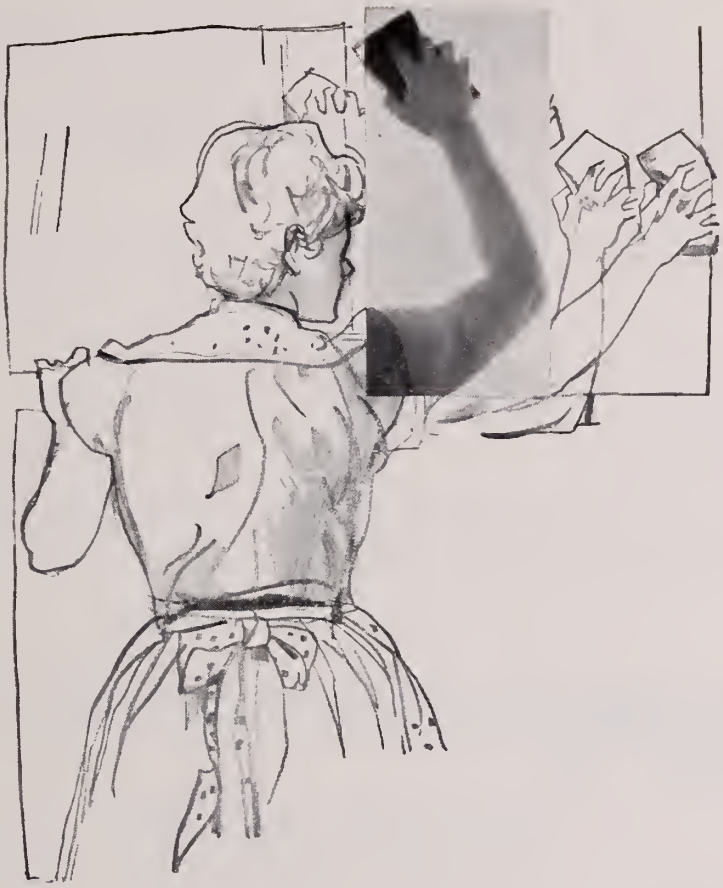
And whatever the topical corticoid need, a suitable Squibb formulation is available—Kenalog-S Lotion—7½ cc. plastic squeeze bottles. Each cc. supplies 1.0 mg. (0.1%) triamcinolone acetonide, 2.5 mg. neomycin base and 0.25 mg. gramicidin. Kenalog Cream, 0.1%—5 Gm. and 15 Gm. tubes. Kenalog Lotion, 0.1%—15 cc. plastic squeeze bottles. Kenalog Ointment, 0.1%—5 Gm. and 15 Gm. tubes.

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To the relief of musculoskeletal pain, new MEDAPRIN* adds restoration of function

Analgesics offer temporary relief of musculoskeletal pain, but they merely *mask* pain rather than getting at its *cause*. New Medaprin, in addition to bringing about prompt subjective improvement, promotes the *restoration of normal function* by suppressing the inflammation that *causes* the pain.

Medaprin, Upjohn's new analgesic-steroid combination, contains aspirin plus Medrol,** the corticosteroid with *the best therapeutic ratio in the steroid field.*† Instead of suffering recurrent discomfort because of the "wearing off" of analgesics, the patient on Medaprin experiences a smooth, *extended* relief and more normal mobility.

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Dosage: The recommended dosage is 1 tablet q.i.d. The usual cautions and contraindications of corticotherapy should be observed.

Supplied: In bottles of 100 and 500.

Formula: Each Medaprin tablet contains

- 300 mg. acetylsalicylic acid, for prompt relief of pain
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References: 1. Finkelstein, M., et al.: J. Pharmacol. & Exper. Therap. 125:330 (April) 1959. 2. McHardy, G., et al.: Postgrad. Med., in press. 3. Winkelstein, A.: Amer. J. Gastroenterol., in press. 4. Finkelstein, M., et al.: Presented at Fall Meeting, Amer. Soc. Pharmacol. & Exper. Therap., 1958. 5. Leming, B.: Clin. Med. 6:423 (March) 1959.

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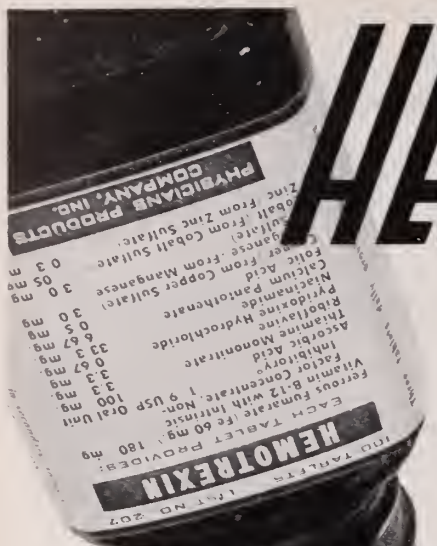
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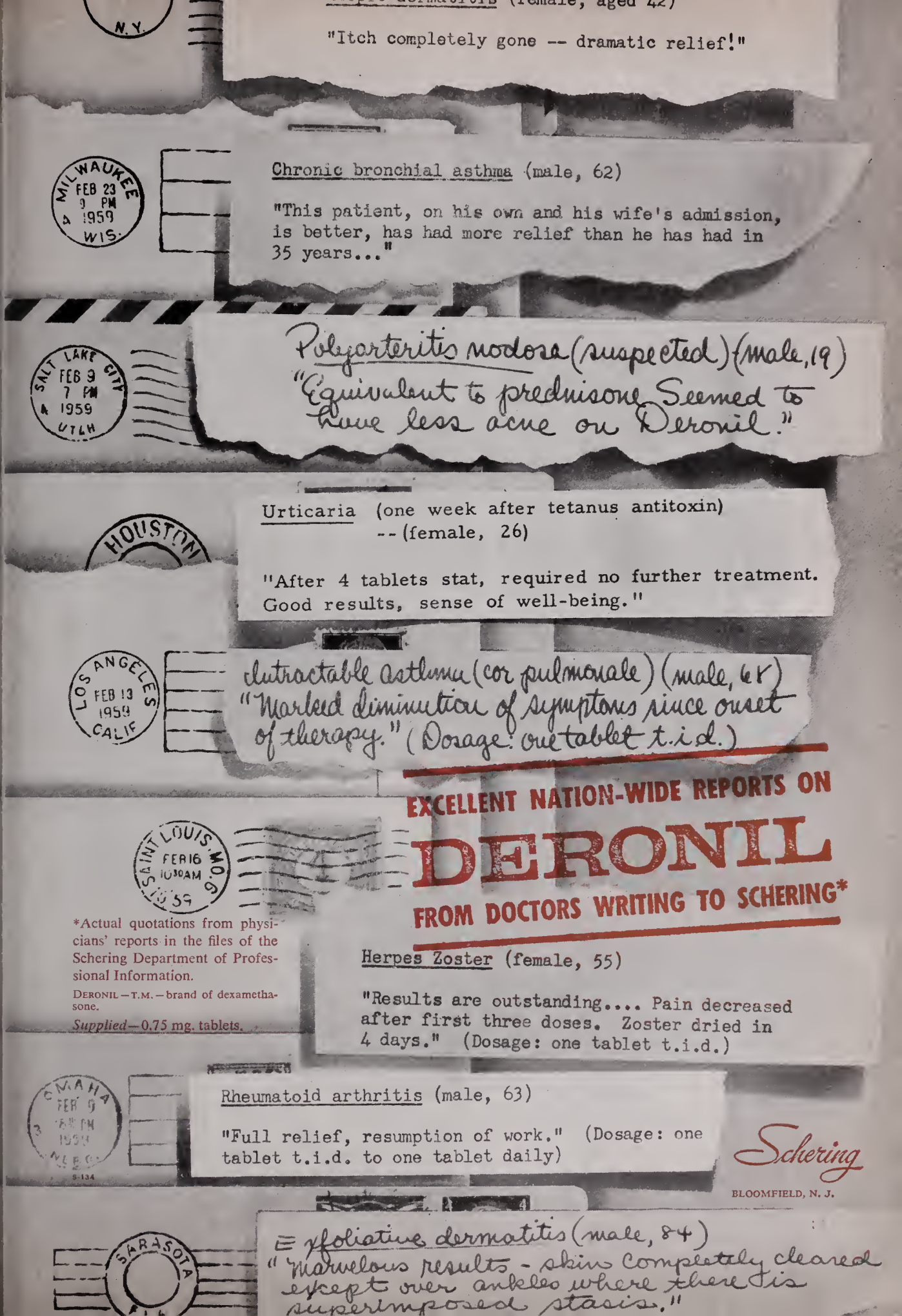
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Guest Editorial....

Is the Tail Wagging the Dog?

THE TREMENDOUS EMPHASIS placed on research in every branch of endeavor is no where more enthusiastically advocated than in our medical schools. It should be understood at once that research in medicine has brought most of the amazing progress which has been made in the past 50 years. This half century has probably seen developments more important than the total of the several preceding centuries. The same applies to industry.

It is, therefore, quite natural and human to feel that research can accomplish anything when enough money is provided. Enormous amounts have been allocated by various federal agencies, drug manufacturers, foundations and philanthropists. It is not surprising, therefore, that research has risen to such heights as to obscure the clinical teaching in some of our schools. Indeed in many of our medical societies the amount of research done and the *number* of papers published are considered more important as requisites for membership than the clinical ability of the applicant.

When a new professor is considered for a Clinical Department in our medical schools his research accomplishments are thought more important than his clinical ability and experience.

The duplication of effort is out of all reason. The federal agencies make grants for the same studies in many parts of the country, the organizations interested in special diseases collect large amounts for research along specialized lines and when their projects are accomplished some spread into other fields already covered.

This editorial is not intended to minimize the importance of research or to underestimate the results obtained. We should, however, keep clinical teaching and care of patients in first place in our medical schools and not go overboard for research. We should avoid unnecessary duplication and useless effort, we should realize that an individual with a "grant" is not always a desirable acquisition and when we accept money we should use it wisely.

Another angle to this situation is that medical schools have become quite dependent on these grants, particularly from the Federal Government, for faculty salaries and overhead expense. If this source of income were cut off the financing of many schools would be seriously affected. This would lead to federal subsidization with its inevitable control, thus increasing the danger of socialized medicine.

Carrington Williams, M.D.

The Implications of the Medical History of General Lee

JOHN C. KRANTZ, Jr., Ph.D.
Baltimore, Maryland

A FLEECE-LIKE FOG enveloped the Ohio River that early morning in March, 1838, as the old paddle steamer puffed leisurely downstream toward the Mississippi, later to be named by President Lincoln as the "Father of Waters". Standing on the bow with his erect body silhouetted against the pearl-gray sky was First Lieutenant Robert E. Lee. An order from the United States Engineer Corps dated April 6, 1837, assigned First Lieutenant Robert E. Lee to work on the channel of the Mississippi River at St. Louis. The river was washing out a new channel on the Illinois shore. The cutting of this channel was throwing up a bar opposite the town of St. Louis. The outcome of this river prank was all too serious to the populace of the town; its commerce was in danger of complete destruction. This was the problem to which the enterprising engineer, Lt. Lee, was assigned.

The day that the Lees arrived in St. Louis, Dr. William Beaumont took possession of the greater portion of the Clarke premises and remained there for a period of eighteen months until October 31, 1839. It is likely that Lee and Beaumont met here for the first time, for Beaumont had refused to live in Jefferson barracks at St. Louis. For the month of May, 1838, the families of Clarke, Lee and Beaumont found themselves together in the Clarke mansion. In June the Clarkes moved and the Lees occupied the two rooms and portico that had been the home of Meriwether Clarke and his wife.

Here the Lees and the Beaumonts lived together for one year in complete harmony. The children playing together imagined themselves steamboats puffing along the Mississippi, and as Lt. Lee commented, "They played so hard I was fearful of the bursting of their boilers." Frequently after a day of arduous toil on the Mississippi the two families joined their thoughts in music. Beaumont's daughter, Sarah, played the piano. "Major Hitchcock, a frequent visitor, joined in on the flute and Lee, not dreaming of secession, turned the pages." Lee became very fond of the congenial Mrs. Beaumont and later in his letters to his friends in St. Louis always wanted to be remembered to the wife of the doctor as well as to his staunch friend, the doctor himself. The young engineer in these pleasant surroundings pushed forward his work on the harbor, which acquired for him an enviable reputation and a Captain's commission.

Prior to meeting Lt. Lee, William Beaumont had performed the experiments which were to immortalize him in the field of medicine, and this is how it happened. The report of the discharge of a gun was not an occasion for alarm at Mackinac; hunting was a recognized occupation. But on June 6, 1822, inadvertently a shot was fired, the report of which reverberated around the world and its echo was to be heard through more than a century of oncoming time. Alexis St. Martin, a youth of nineteen years, was shot while standing adjacent to the barrel of a shotgun. The whole discharge, wadding and all, entered his body in the upper abdominal region. He fell, his shirt was burning—the prognosis of the bystanders was death. But destiny had carved a different course for St. Martin. Beaumont was called. In twenty minutes he was at the side of the moribund youth. His surgery was effective; his tonic of muriatic acid and wine was alleged to contribute strength and St. Martin recovered. After the cicatrization of his wound he was left with a gastric fistula, a human guinea pig.

It was this unique test object which enabled Beaumont to study the fundamentals of the peptic digestion process. Beaumont, away from any laboratory of physiology, an army surgeon on the frontier of civilization, adequately described the basis of the process of protein digestion in the stomach. St. Martin's gastric juice secreted at Mackinac was sent to Franklin Bache, grandson of Benjamin Franklin, at Philadelphia. It crossed the Atlantic and reached the great Swedish chemist, Berzelius, in Stockholm, and Professor Dunglison of the University of Virginia determined in it the presence of hydrochloric acid.

KRANTZ, JOHN C., JR., Ph.D., *Professor of Pharmacology, University of Maryland.*

Presented before the Section on History of Medicine, Richmond Academy of Medicine, February 10, 1959.

Lee's interesting friendship with Beaumont brought him personally in contact with one of the great characters of American medicine. Later he was to experience personal illness which would bring him into the patient-doctor relationship with many other physicians. On April 25, 1853, Dr. Beaumont died. Thus death ended a friendship of fourteen years but for Lee a rapidly pyramiding series of events were bringing him with meteoric rapidity into national prominence. One of these events had medical significance.

In July, 1849, Lee was engaged personally in the supervision of laying the huge stones which were to form the underwater foundation of Fort Carroll in the Patapsco River, the harbor of Baltimore. He experimented with the problem of laying concrete under water. Late in July, Lee developed malarial fever which became so severe that he was forced to return to his home in Arlington. Although he improved and was able to return to work, the illness still dogged him. Freeman records that this was his only illness prior to 1863 of which there is any record.

Although the nature of malaria and its transmission by the anopheles mosquito was not discovered until the turn of the century, it does appear that Lee was stricken with the plasmodium vivax. This form of malaria is characterized by exacerbations when the individual is under stress, with concomitant lowered resistance, and in a hot climate suitable for the proliferation of the plasmodium. This was substantiated by the fact that the disease returned during the hard summer campaigns of Antietam and Gettysburg. Indeed it is possible that the plasmodium vivax played a role in the outcome of these crucial battles and consequently in ultimate loss of war by the Confederacy. The records show that malaria was the most prevalent disease extant in the armies under the Stars and Bars.

Malaria is as old as the written pages of the history of mankind. The writer of the book of Deuteronomy states, "And the Lord will smite thee with a consumption and a fever and with an inflammation and an extreme burning." Nor was the disease new to military history in the Civil War. The vacillation of the Greeks before the walls of Troy was not due to their lack of military prowess but to the malaria which was rampant in their ranks. The soldiers of Hannibal, victims of the ubiquitous anopheles, dropped like mists before the sun in the pestilential regions surrounding Rome. In the Yorktown campaign, which was to close the Revolutionary War, General Washington had a formidable ally in the dashing young General Lafayette. There was, however, another ally of Washington and his colonial troops. It was insidious, subtle and unrelenting. Malaria was extant in ranks of the troops under Cornwallis. In World War I the ill-fated British Expeditionary Force to the Dardenelles was to encounter the omnipresent anopheles mosquito. Ninety-five thousand of the 115 thousand troops contracted malaria. It was here that the English lost that brilliant scientist, Moseley, who at 27 years of age had discovered the atomic numbers of the atoms of the elements. This was a loss to all mankind.

Prior to World War II, quinine, the alkaloid isolated by Pelletier and Caventou in 1820, was the principal antimalarial drug. The Dutch-owned island of Java produced 95 per cent of the world's supply of quinine. When the island fell into Japanese hands shortly after the attack on Pearl Harbor our ability to combat malaria and sustain troops in the jungle could have been thwarted with the loss of this island. Atabrine, a product of German scientific ingenuity, was synthesized by American chemists and it became our principal antimalarial drug. The successful campaigns of the Pacific, North Africa and Sicily would have been impossible without it.

Malaria still poses one of the world's greatest disease problems. Approximately 500 million people, about one-fifth of the world's population, suffer with this disease. The number of deaths each year is approximately two million. Science has met the problem adequately. Atabrine was followed by chloroquine and later with Primaquin and Daraprim. These drugs, coupled with such insecticides as DDT, can eradicate the disease. But other problems are posed by the eradication of this disease. Where the incidence of the disease is greatest, the economic structure of the communities is lowest and the cost of medication and bulging population pressures militate against the conquest of man's unrelenting enemy, malaria.

The hard campaign of the battle of Antietam was over. The Army of Northern Virginia was quartered south of the Rappahannock during the dismal winter 1862-1863. In the spring of 1863 Lee was eager to take the offensive again and carry the war into Maryland and Pennsylvania. At a crucial point in the planning of his campaign against the Union forces under Hooker, the fates conspired against

the Confederecy and Lee became ill. This was his first illness as Commander of the Army of Northern Virginia.

The General had been suffering from insomnia. He contracted a severe throat infection which left him with severe pains in the arms and chest. Medical historians believe that these paroxysms were anginal in origin and secondary to a pericarditis. The severity of the illness necessitated his removal from the bleak quarters and to be placed under the care of Dr. Lafayette Guild. Guild was taken sick and Lee was placed under the care of Dr. S. M. Bemiss a distinguished New Orleans physician who was serving as a surgeon with the Confederate forces.

Lee was in bed for several days. He stated, "They are tapping me all over like an old steam boiler before condemning it." After a week his symptoms ameliorated. He was left with what his medical advisers termed rheumatic twinges and weakness. It is probable the twinges were anginal in origin. This illness partially incapacitated him for almost a month. Back in action he faced the enemy at Chancellorsville, where he was to lose what Freeman called "his right arm," Stonewall Jackson.

In 1863 there were no specific anti-infective drugs. The incriminating laryngitis could have been thwarted by the sulfonamides, or the antibiotics. This may have changed the course of the war. The pericarditis, had it developed, likewise would have likely yielded to massive antibiotic therapy. Although the disease, angina pectoris, with its classical symptoms had been described by Heberden in 1768, no specific drugs were available. It was not until 1867, four years after Chancellorsville, that the famous English therapist, Lauder Brunton, described the value of amyl nitrite in angiospastic disease and a decade later Murrell used glyceryl trinitrate in its treatment. Nearly a century later glyceryl trinitrate remains the drug of choice in angina pectoris. Its prompt dilatation of the coronary vessels, relieving the cardiac hypoxia, has given it an enviable position in the therapy of angina which today remains unchallenged.

The problem of medical care in the Confederate Army was colossal. To illustrate:

The Confederacy had 600,000 men under arms. Of this number, 200,000 died of wounds or disease and it is estimated that the entire 600,000 were at one time or another under medical care for the treatment of disease or wounds.

Dr. William H. Taylor told of his experience in the treatment of the variety of ailments which the military surgeon encountered. He carried a ball of opium in one trouser pocket and a ball of blue mass in the other. He asked the question, "How are your bowels?" If open, he gave opium and if shut he gave blue mass.

Medical supplies were very limited. The most valued medicament was whiskey and apple brandy. Morphine was available in a limited amount only. It sold for $28 a dram, and quinine $22.25 an ounce. Chloroform was the anesthetic choice in the Confederate Army. Surgical mortality was extraordinarily high and abdominal wounds, penetrating a viscus, were almost invariably fatal.

The high watermark of the Confederacy had been reached in charge of Pickett's brigade at Gettysburg. In the spring of 1864, Grant carried the war into Virginia to crush the Army of Northern Virginia and take the capital city of Richmond. Grant suffered 33,000 casualties in the Battle of the Wilderness and Lee's dauntless army lost 20,000 men. Lee concluded that Grant was poised to march on Richmond and invited attack in order to split the enemy's forces. At this critical point Lee was plagued with an acute intestinal ailment. He was forced to leave his tent and take treatment in a hospital house. As he lay prostrated by his illness he would often repeat, "We must strike them a blow." His temper flared at Colonel Venable as he attempted to direct the campaign from his bed. Lee partially regained his strength and rode with his old audacity with his troops in a carriage to Cold Harbor. Thus at a critical period of the Wilderness campaign Lee was nearly incapacitated for about 15 days with what has been called a severe intestinal ailment. General Ewell was simultaneously affected with the same type of illness.

The duration of the debilitating diarrhea which afflicted General Lee appears to rule out the possibility of an acute type of food poisoning. Rather one is disposed to consider that the attack was one of bacillary dysentery or amebiasis. With the assumption that it was of bacterial origin, it is clear that the remedies of Lee's day would be of little avail. Calamus root, tannin-bearing herbs and opium to check the diarrhea were the standard drugs of choice. The role of bacteria as a causative factor in childbed fever had only been discovered 14 years prior to the Battle of the Wilderness by Ignaz Semmelweis in Vienna.

Advances in this field have been marked. With one of the non-absorbable sulfonamides such as sulfaphthaladine, or a suitable antibiotic, Lee could

have joined his troops astride Traveler in a few days.

One cannot rule out the possibility of amebiasis. The endameba histolytica was not identified by Koch as the incriminating organism in this disease until 1883. Strides of great magnitude have also been made in this field. Emetine, the alkaloid of ipecac, has been joined with the arsenic-bismuth-bearing compound Milibis and the antibiotic terramycin. Any of these drugs could have thwarted the disease within a period of 3 to 5 days. It is of interest that Napoleon suffered with amebiasis, when he was in exile on St. Helena.

From the Wilderness to Appomattox, General Lee appeared to suffer with no major illness. His letters, however, register complaints of muscle and joint pains to which he referred as sciatica, lumbago and rheumatism, on various occasions.

During the first few years of his presidency at Washington College 1865-68, Lee appeared to be in reasonably good health. However, his old enemies rheumatism and angina pectoris were simply lying in ambush waiting to strike their final blow. In October, 1869, Lee had driven some members of his family for a ride in a carriage. Upon return the mare stumbled and fell in front of the house as if she were dead. Lee found that the animal was nearly choked by a tight collar. He rebuked himself severely and in emotional distress caressed the animal. Later, symptoms of chest pain developed along with a heavy cold. Doctors diagnosed his malady as a return of the pericarditis. The illness persisted and the General was of the opinion that his public life was about over. In March, 1870, the college gave him a leave of absence to travel to warmer climates, which it was believed would be beneficial to his rheumatic condition. This was to be the final review.

Lee was hailed with praise and adulation as he visited many of the cities of the south. His soldiers came from far and near to pay homage to their peerless leader. At Augusta a young boy, 13 years of age, threaded his way through a crowd of soldiers and looked on the General with veneration. His name was Woodrow Wilson. This final parade of the great soldier was wearing and fraught with great emotion. In his letters he complained about the chest pain becoming unrelenting. He now experienced the pain while at rest in addition to following exertion. Lee stated his "complaint was fixed and old."

After returning to Lexington, Lee, following the advice of his physicians, set out for Baltimore to consult Dr. T. H. Buckler, who had gone to Paris after the end of the war and had returned to Baltimore. Baltimore was the site of Lee's first major illness, malaria, and it is ironical that he should have been sent there to seek advice in this last illness. The journey was exhausting for Lee. Buckler reported that his heart and lungs were "working well" although the heart was somewhat "diffuse". Lee was told that his principal difficulty stemmed from his rheumatic "constitution". He was advised to avoid exposure to cold, dress warmly and drink lemon juice. That this rheumatic condition was the source of great distress to the General is evidenced by the fact that in August, 1870, he visited Hot Springs to take the "broiler" and "hot spout" treatment. Furthermore, his physician had applied the blister treatment to relieve his painful shoulder. The blistering plaster of cantharidies as a powerful counterirritant was considered standard medical practice in Lee's time.

The late Dr. Lewellys F. Barker in his study of the medical records of General Lee was of the opinion that Lee suffered from arthritis in the shoulder joints and in the spine, in addition to his anginal pain. In this field of therapy it is clear that real advances have been achieved. The wonder drug of the turn of the century was aspirin. It remains so today. It is likely that Lee could have lived more comfortably with less pain and more freedom of joint movement with a regimen of salicylate therapy. Furthermore, with the advent of steroid therapy in the arthritides by Hench in 1949, cortisone, hydrocortisone, and later Prednisone and Aristocort, have been made available in the treatment of arthritis. Almost overnight these substances have magically opened doors that led to a better understanding of the etiology and therapy of rheumatoid arthritis. At long last the "Great Crippler" with its distorted biochemical and physiologic balances is beginning to reveal itself and yield to these powerful and precise tools.

For General Lee the shadows were rapidly lengthening and the sun was fading beyond the western horizon. It was September 28, 1870. Lee's schedule for that day was routine college administration and a meeting of the vestry of Grace Church at 4:00 P.M. Eight years prior to this fateful day the Antietam campaign was completed and Lee wrote to President Davis, "History records but few examples of a greater amount of labor and fighting than have been done by this army during the present campaign." The day was rainy and chilly, the meeting

room at the church was unheated. Lee presided over the vestry with a cape around him. Here Lee rendered his last service, away from the crackling sound of musket fire at Antietam, far from the glory of Chancellorsville; here under the great canopy of God he subscribed $55 to support the salary of Doctor Pendleton, the clergyman, who was one of his former lieutenants in arms. Returning home he collapsed at the dinner table in an attempt to offer thanks to God.

Lee probably suffered from a cerebral thrombosis which was designated by his physicians as a "venous congestion". He rallied to a state of blurred consciousness. He took his medicine faithfully. The doctors applied cold dressings to his head and hot applications to his feet. They cupped him and gave him medicine, as Mrs. Lee recorded in a letter to her cousin. He slept much and talked very little. On October 8 he stated to his physician slowly and distinctly, "I . . . feel . . . better." In spite of the hopeful spirits of his doctors and his former comrades in arms, life was ebbing fast away and he sensed it. On October 12 at 9:15 A.M., Grant was likely sitting comfortably in the White House at breakfast, Lee was unconscious. Perhaps through his ischemic brain again soared the thoughts of Malvern Hill, or the Wilderness and the forward movements of the Army of Northern Virginia. Clearly he exclaimed, "Strike the tent," and the disease process which began at Chancellorsville now claimed him at Lexington. It is likely that the old actor, arteriosclerosis, famed for his multiplicity of roles, came finally upon the stage to end the act and draw the curtain. And Lee then had broken the barrier of time and now belonged to the ages: magnificent, majestic and dauntless to the end.

The implications of medical history of General Lee in the retrospect of almost a century point clearly to two salient facts. First, in the physical ailments with which the General was associated or personally afflicted tremendous strides have been made. One might reiterate—peptic ulcer and his association with William Beaumont, malaria, septic sore throat, pericarditis, angina pectoris, and arthritis. And indeed our knowledge of the arteriosclerotic processes is at long last being unravelled. Second, in the moral and emotional forces of man's life there appears to be little or no progress in the century which has passed since the War Between the States. Pride, rapaciousness, selfishness and greed, the precursors of war, still are rampant among the nations. The glory has been removed from war, but additional horror has been substituted for it. If Lee could return I feel that his clarion message for all mankind would be that which echoed through the Galilean hills two thousand years ago, "Blessed are the peacemakers for they shall be called the children of God."

———

29 South Greene Street
Baltimore, Maryland

New Ear Wax Removal

A new chemical preparation that softens impacted ear wax so that it may be easily removed was described in a current American Medical Association publication. "The ease with which this agent facilitates the removal of ear wax is in striking contrast to the cumbersome operative irrigation techniques," according to the article in the March Archives of Otolaryngology.

The standard method for removing ear wax is to irrigate the ear with water and then remove the wax with a blunt instrument. If the wax has been impacted for a long time, the outer layer of the ear canal skin may become attached to the wax. When the wax is removed, the skin is torn. A wax-dissolving substance will prevent such injury to the skin.

The new preparation, with the tradenames Cerumenex and Cerulau, is put into the ear a day or two before the wax is to be removed. By that time, the wax is soft and loose and easy to remove.

The preparation was used on 230 patients with varying degrees of excessive and impacted wax. A "dramatic" wax dissolution was observed in most instances, with complete removal in 204 patients (88.7 per cent). Nineteen (8.2 per cent) had good results and seven (3 per cent) poor results. No patient showed an adverse reaction to the agent.

The report was made by six researchers, headed by Dr. Arthur C. Reiniger, chief of the department of otolaryngology at the Stuyvesant Polyclinic, New York.

Charles Édouard Brown-Séquard

His Richmond Sojourn

HARVEY B. HAAG, M.D.
Richmond, Virginia

A BIOGRAPHY of Dr. Charles Édouard Brown-Séquard is of special interest to a Richmond audience of physicians and people of similar likes because of the fact that he was for a time, short though it was, a member of the faculty of the Medical College of Virginia. In view of this and the need and desirability of keeping our program within reasonable time limits, the present glimpse into the life of this illustrious and restless spirit will be largely concerned with his Richmond sojourn. I might interject here that many of you will probably recall that when Dr. Beverley R. Tucker was presiding officer of the Historical Section of the Richmond Academy of Medicine, his chairman's address, given on the night of April 13, 1937, was entitled: "Charles Édouard Brown-Séquard—A Sketch". The essence of Dr. Tucker's essay, presented in the charming fashion in which he alone could talk and write, was published in the Bulletin of the Richmond Academy of Medicine, June 1937.

Brown-Séquard's father was Charles Edward Brown of Philadelphia, a captain in the merchant service and his mother was Charlotte Séquard a lady of pure French descent living on the Isle de France (later, the Island of Mauritius) in the Indian Ocean. On April 8, 1817, some three years after the marriage of his father and mother, Charles Édouard was born. Sometime prior to his birth, his father sailed to India to procure rice so direly needed on his starvation menaced home island. While it is known that the ship took on the cargo, it never returned to the Isle de France. Whether it was lost in a storm or whether it was taken by pirates in the Gulf of Bengal has never been established. Thus it was that his child, Charles Édouard Séquard-Brown, was born a posthumous child. Thereafter his mother was forced by unfavorable financial circumstances to support largely by her own labors both herself and her son for many years. Not daunted by this, and determined that young Charles Édouard should have the best in education, she took him to Paris for advanced education when he was about 21.

So much indebted and devoted did Charles Édouard feel to his mother that on her death, he paid her the compliment of reversing the usual order of surnames and so, instead of remaining Charles Édouard Séquard-Brown, he became known as Charles Édouard Brown-Séquard.

After completing what today we would probably call his pre-medical education, Brown-Séquard enrolled in the Medical School of the University of Paris from which he graduated in 1846 upon presentation of his thesis "Researches and Experiments on the Physiology of the Spinal Cord". Although he ventured into the practice of medicine, usually as a neurologist, frequently from time to time throughout most of his life, his first love was obviously experimental medicine. Incidentally, these excursions into medical practice seems to have been done, at least in many instances, as a means of enabling him financially to carry on with his researches. In 1852 the political environment in France apparently became unbearably distasteful to him and so he immigrated to the United States. Sentiment might have been one reason he made his port of entry Philadelphia, his father's native city. However he had not been in Philadelphia long before he was found lecturing in New York and Boston. It seems that it was in Boston where he met Miss Ellen Fletcher, usually referred to as a niece of Daniel Webster, but actually that celebrity's first wife, whom Brown-Séquard married in 1853. After his stay in Richmond he returned to France only to return to this country in 1864 to accept the chair of physiology and pathology of the nervous system at Harvard Medical College, a position he held for four years when he left again for Paris. This traveling pattern was to follow him throughout life; it has been estimated that he crossed the Atlantic Ocean some 60 times! In mid-1878, at the age of 61, he was appointed Professor of Medicine at the College de France, succeeding his distinguished and but recently deceased colleague, Claude Bernard.

Presented before the annual meeting of the Section on the History of Medicine, Richmond Academy of Medicine, February 10, 1959.

He maintained his academic connections with the College de France more or less continuously until the time of his death on April 1, 1894, at the age of 77, three months after the death of his third wife.

Now with reference to his stay in Richmond. Almost immediately after it had been granted a charter of its own on February 25, 1854, the Board of Visitors of the Medical College of Virginia confirmed the desirability of establishing a Professorship of the Institutes of Medicine and Medical Jurisprudence. Seven names were proposed for this position and among these was that of Brown-Séquard who, as it happens, had met many members of the local profession at the 1852 meeting of the American Medical Association in Richmond. On the second vote he was approved unanimously. Dr. Brown-Séquard learned of this offer at a time when he had returned to the Isle de France and it met with a responsive acceptance. He was then 37 years old. With reference to this development the Virginia Medical and Surgical Journal (3:174, 1854) publicized as follows:

"We are glad to inform the friends of the Medical College of Virginia that Mr. Patton, the president of the board of visitors, has received a communication from Dr. Séquard, declaring his intention to assume the duties of the Physiological Chair in that Institution at the earliest possible moment. He states that without some unforeseen occurrence, he will be in Richmond by the last of November.

"We congratulate the Virginia profession on this valuable accession to their ranks, and think we may anticipate, from the well deserved reputation of Dr. Séquard, that he will add great strength to the faculty of our school, and materially aid in advancing the cause of southern medical education."

Just what the "Institutes of Medicine and Medical Jurisprudence" was is not clear. From the records of the Department of Physiology of the Medical College of Virginia, it would appear that Dr. Brown-Séquard succeeded Dr. Carter Page Johnson as professor of physiology, Dr. Brown-Séquard in turn being succeeded by Dr. Levin S. Joynes.

That everybody was not happy is evidenced by the clamor raised by some Virginians, the objections mostly taking the form of criticism against Dr. Brown-Séquard on the basis that he was a foreigner. This led the editor of the Virginia Medical and Surgical Journal to curtly retort: "We are striving to build up a great College in Virginia, not to make fat offices to put our friends in. We look around for the best man to fill a professorship, and we take him, whoever he is."

Upon his arrival at the College, Dr. Brown-Séquard was allotted space in the old Egyptian Building. Perhaps the most detailed description of Dr. Brown-Séquard's association with the College is that by Dr. William H. Taylor, himself an unusual character, who studied under Dr. Brown-Séquard. It is part of that fascinating historical paper "Old Days at the Old College" which Dr. Taylor read before the Alumni Association on May 26, 1913 and which was published in the Old Dominion Journal of Medicine and Surgery for August, 1913.

Because of Dr. Taylor's superb facility of description and hence for your greater enjoyment I would like to quote, rather freely, from his paper. According to Dr. Taylor: "By far the most picturesque member of our faculty was Dr. E. Brown-Séquard, and though his transit across our firmament was rapid, it was brilliant and highly spectacular - - - -". "He was, in truth, one of those not very uncommon teachers who, very wise themselves, yet do not know enough to understand how very ignorant their pupils are. Moreover, his ability to speak the English language fluently was far from first rate. A discourse as rendered by him was not very unlike an attack of spasmodic asthma, and frequently his agony in trying to make himself comprehended was, if anything, greater than ours in trying to comprehend him". Later: "Under the economy which governs this weary world it seems to be an inevitable law of nature that college faculties shall forever be in some kind of trouble or other. So it came to pass that Dr. Brown-Séquard and his colleagues fell asunder. The cause of this estrangment I do not know with sufficient exactness to justify me in stating it. He stayed with us for only one session. However his departure may have affected the faculty, it grieved the students deeply. We regarded him as a mighty though inscrutable pillar of our college - - - -". "- - - - I will say that perhaps the most obvious trait of his character was an earnest desire for full and accurate knowledge. This he sought to satisfy by the only method which science can recognize—the method of observation and experiment." According to Dr. Tucker, Dr. Taylor had told him of the time he had saved Dr. Brown-Séquard's life. It seems that Dr. Brown-Séquard was experimenting in the basement of the College on the functions of the skin. One day, working by himself, he varnished a portion of his body; not observing any peculiar reaction, he continued until

he varnished his whole body including his face. Shortly thereafter Dr. Taylor discovered him lying unconscious on the floor and quick-mindedly washed Dr. Brown-Séquard off with alcohol and revived him. Dr. J. B. McCaw, dean of our medical school from 1871 to 1883, was also on intimate terms with Dr. Brown-Séquard of whom he stated: "The enthusiastic nature of Brown-Séquard shows us his whole life and bearing. Simple-minded and guileless, he was truth itself as far as he saw it. His most affectionate nature made dear friends wherever he was."

Dr. Brown-Séquard undoubtedly had some serious grounds for personal disappointment with the College. No suitable installations for experimental physiology appears to have been provided, thus he was unable to progress satisfactorily with his researches. Being of the temperament and inclination he was, he had little liking to be associated with members of a faculty who did not have as their sole unremitting aim in life the prosecution of experimental research. As Olmsted in his excellent biography says of Brown-Séquard in this connection: "He could have been really happy nowhere in the United States, either in this pre-civil war period, or for another quarter century until sufficient interest in original investigation would be aroused to instigate the founding of the American Physiological Society in 1887." Added to these discontentments was his great repulsion to the idea of slavery, a repulsion he used to express with the same frankness with which he discussed scientific questions. His feeling about slavery must have been conditioned by his early life on the Isle de France where the Negroes made up the large majority of the population and had long been freed; likewise the equalitarian principles which triumphed in the French Revolution were strong in him. Furthermore it was his nature to be on the move. At any event the minutes of the Board of Visitors of the Medical College record him as having retired on March 30, 1855, when acting on their acceptance of his note of resignation. During his stay in Richmond it is reported that he addressed the Richmond medical profession twice, once on experimentally produced epilepsy and once on galvanism.

Following as he did, Magendie and Bernard, Brown-Séquard was the last in a line of great masters in French experimental physiology. It has been said of him that he worked by intuition, his power of which was remarkable; his induction was singularly rapid, apparently savoring of revelation. He was quick to grasp the implications in the work of others. His weaknesses, more apparent in his later than in his earlier work, were his lack of self-criticism and his tendency to exaggerate the scope of a few favorite theories. His earliest discovery, the crossing over of sensory impulses in the spinal cord is called classical in method and representing a complete study. His studies on epilepsy were almost the reverse. Towards the end of his career his broad general conception of the possibilities of organotherapy seems to have arisen from an almost prophetic instinct although his experimental evidence carries little conviction with us today.

Dr. Brown-Séquard, in the words of Dr. Olmsted: "- - - - left an indelible mark on physiology and medicine, and we look back on him as a brilliant and indefatigable investigator and courageous human being, who when he thought that he himself could best serve as the subject of an experiment, did not hesitate to submit even his own body to the test."

In closing I would like to thank Miss Thelma Hoke of the Medical College of Virginia, Mrs. Patty R. Boatwright of the Richmond Academy of Medicine and Dr. Russell V. Bowers for their great help in the preparation of this paper.

Bibliography

(*other than that detailed in the text*)

1. Pathfinders in Medicine, Victor Robinson, Medical Life Press, New York, 1929.
2. Medicine in Virginia in the Nineteenth Century, Wyndham B. Blanton, Garrett and Massie, Inc., Richmond, 1933.
3. Charles Édouard Brown-Séquard: A Nineteenth Century Neurologist and Endocrinologist, J. M. D. Olmsted, The Johns Hopkins Press, Baltimore, 1946.
4. A History of Neurology, Walther Riese, M D Publications, Inc., New York, 1959.

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Inguinal Hernia in Infants and Children

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ONE OF THE COMMONEST pediatric surgical conditions of congenital origin is inguinal hernia. Surgical correction of this condition is most satisfactory, and it is my policy to advise operation as soon as the hernia is discovered. In adults there is little disagreement concerning this, although trusses are still widely marketed and sold for use at all ages. There is seldom if ever a true indication for trusses except when the patient's general condition precludes any consideration of operation. It is my feeling that trusses never adequately hold hernias and actually cause harm by irritating the skin and other tissues of the area. This particularly applies to small children in whom the truss usually fits poorly and does not adjust to the rapid growth of the child.

There is considerable misinformation regarding childhood hernia, and even today the policy of waiting for the child to grow older has many advocates. The policy of waiting is not only dangerous to the child, but a nuisance to the mother, who must always be concerned with restricting the child's activities. One frequently heard misconception is that children can have *direct* as well as *indirect* hernias. This is possibly due to the fact that the family physician or pediatrician classifies those in the scrotum as indirect and those of lesser prominence as direct. In actuality, hernias in infants and children are the result of failure of fusion of the pathway of testicular descent, and in this respect resemble thyroglossal duct cysts, persistent branchial cleft sinuses and other similar conditions. They invariably follow the pathway created by descent of the testicle into the scrotum and thus are *indirect* or *oblique* in nature. (Fig. 1) Simply stated, the testicle, in its descent from the genital ridge near the kidney to its permanent resting place in the scrotum, pushes before it a pouch of peritoneum known as the *processus vaginalis* and becomes fixed by the gubernaculum to the bottom of the scrotum. At about the ninth month of fetal life, fusion of the layers of the processus vaginalis is supposed to occur, while failure of this closure results in variations of hernias and hydroceles. (Fig. 2) There is no muscular weakness as there is in direct hernia or as is present in umbilical hernias. Since the patency of the processus vaginalis is responsible for the hernia, it is unlikely that cure by spontaneous closure or by continued use of a truss ever occurs. Throughout its course in the inguinal canal the sac is narrow and elongated and is subject to incarceration of its contents. In childhood the omentum is underdeveloped and short and is seldom found in hernia sacs. Ordinarily small bowel is the organ most prone to enter the sac, although sliding hernias of bladder, colon or female adnexae are often seen. Incarceration of indirect hernias in children is common, being the result of distention of the distal sac while the

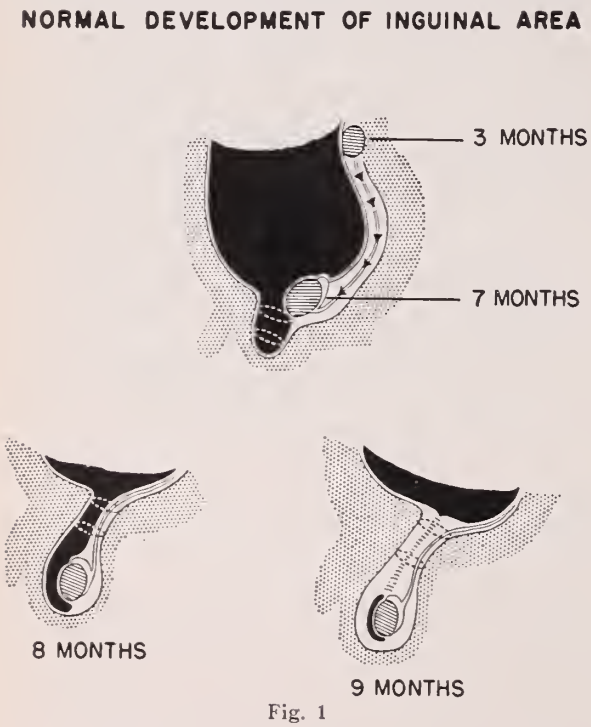


Fig. 1

(from Postgraduate Medicine—Clatworthy—Aug. 1957)

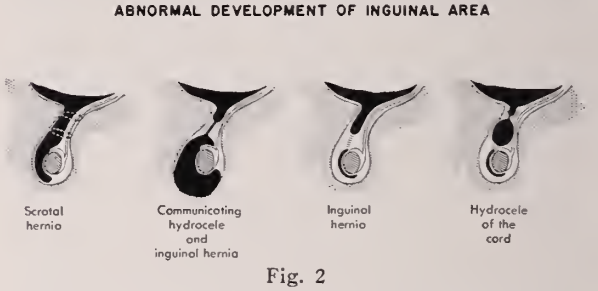


Fig. 2

(from Postgraduate Medicine—Clatworthy—Aug. 1957)

neck at the internal ring remains small. This can be explained to parents as a situation similar to inflation of a toy balloon and pinching off of the opening. In the final analysis, since spontaneous closure of the patent processus vaginalis (a peritoneum-lined sac) is very unlikely and incarceration an ever-present threat, it is apparent that surgical correction is necessary for cure.

The diagnosis of childhood hernia is most often made by the child's parents who report the sudden appearance of a lump in the groin. Most often this lump is easily reducible and the diagnosis is obvious, but occasionally a persistent hernia is confused with hydocele of the cord, inguinal adenitis or an abscess. It is always best for the surgeon himself to see or feel a hernia in a small child but often the parents' description plus suggestive findings are the basis for the diagnosis. In the examination of a small child, particularly an infant, it is difficult to feel the external ring through the scrotum as in adults, and it is necessary to use a different method of palpation as described by Gross. By rolling the spermatic cord from side to side under the index finger against the underlying pubic bone, it is possible to feel a definite thickening of the cord and a "swish" when a hernia is present. This is due to the rubbing together of the opposite sides of the peritoneal sac, and is referred to as the "silk glove sign." (Fig. 3) This is a reliable finding and in contrast to the other side is proof of the hernia's presence. Other methods of demonstration of a hernia are less reliable, as any one knows who has tried to make a small child cough or strain, or has pinched a small baby to make it cry. Diagnosis of inguinal hernia, then, is made by visual inspection, by palpation and by the parents' history, and when the diagnosis is established operation should be advised.



Fig. 3
(from A.M.A. Arch. Surg.—DeBoer—Dec. 1957)

Incarceration requires immediate attention. In males, small bowel is usually involved and must be freed before complete intestinal obstruction with or without gangrene occurs. In females the ovary frequently becomes incarcerated but is usually not strangulated unless it is found to be very tender and possibly discolored even through the overlying skin. Incarceration is common, possibly occurring in as high as 25% of childhood hernias. However, reduction of incarcerated hernias is often accomplished by the physician, by the parent, or spontaneously. In probably about 15% the first indication of childhood hernia occurs with sudden incarceration, but nearly always the hernia is reducible before or after hospital admission. Methods for reduction include gentle taxis, sedation, application of ice bags locally, and maintenance of steep Trendelenburg position. Infants may be held by the feet with the head down in an effort to reduce the incarceration by gravity. Because of the edema consequent to incarceration, it is technically difficult to operate upon these hernias, especially when the patient and the tissues are very small, and it is preferable to reduce the hernia and operate electively when possible. When this is not possible, emergency operation is mandatory. Prematurity undoubtedly plays a part in the occurrence of hernias and the fretfulness associated with feeding problems probably enhances the possibility of incarceration in infancy.

One of the most compelling reasons for early operation in childhood is the likelihood of testicular (or ovarian) damage in incarcerated hernias. Clatworthy has pointed out the tremendous increase in testicular atrophy or necrosis when operation is carried out for incarceration. This is partly due to interference with the blood supply during incarceration but also may result from operative trauma when the tissues are edematous and difficult to deal with. For these reasons elective repair is strongly advised in order to avoid the dangers of incarceration.

Probably the most frequent cause for postponement of operation in the small child is fear of

anesthesia, and often the family physician or the parents will elect to wait until the child is older. Actually, except in the poorly nourished premature infant, anesthesia and operation are no less dangerous as the child grows older. Anesthesia should consist of the simplest general anesthetic available and naturally should be administered by an individual skilled in the method chosen. In infants, general anesthesia with open drop vinyl and ethyl ether is safe and adequate. In small children, rectal pentothal supplemented by open drop ether is entirely satisfactory. In older children intravenous and inhalation methods may be safely employed. The operation should not be a lengthy one, usually taking about 20 minutes, and anesthesia need not be deep. Thus the procedure should be a safe one from the standpoint of surgeon and anesthesiologist, and only in incarceration with concomitant intestinal obstruction, occasionally requiring resection, does the risk become appreciable. It is important to note that incarceration is most frequent in infants, particularly under the age of 6 months, probably because of their frequent crying, and therefore it becomes more compelling to repair the hernia at its first appearance and avoid the hazards and complications of incarceration.

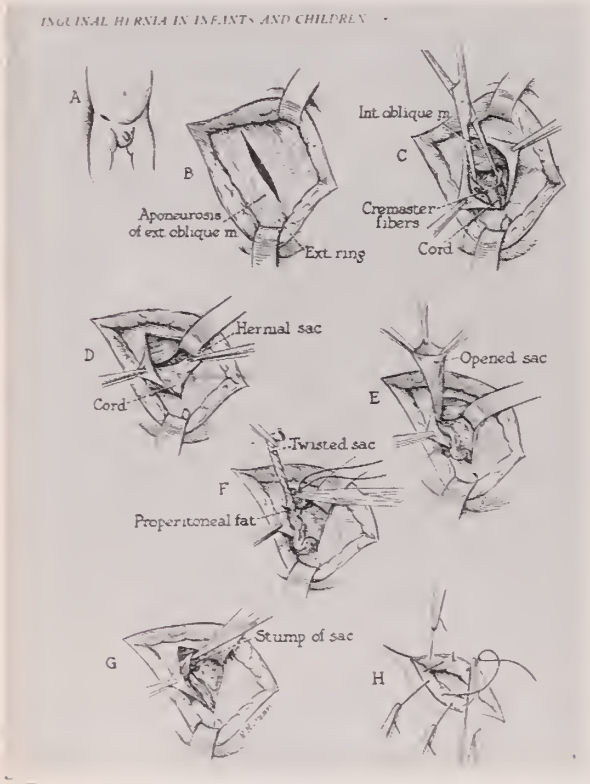


Fig. 4

(from A.M.A. Arch. Surg.—DeBoer—Dec. 1957)

The method and technique of operation are worthy of some description. (Fig. 4) The patient is generally admitted to the hospital on the afternoon prior to operation, although small infants may be brought in early on the morning of operation. It is preferable to perform the operation early in the morning, to forestall restlessness of the patient and the parents. Rectal pentothal in the younger child avoids scenes upon leaving the bedside and in the operating room, and certainly aids in the general ease of the procedure. A transverse incision in the lowest skin crease gives adequate exposure and lends itself to easy closure and a fine cosmetic scar. (This type of incision is also used in adults.) The cord and hernia sac are exposed through an incision splitting the fibers of the external oblique aponeurosis. Without lifting the cord from its bed, the sac is opened and its contents reduced into the abdomen. A vein retractor placed under the internal oblique muscle exposes the neck of the sac. If the sac is twisted on itself several times, bowel will no longer enter the neck and the sac is completely freed. It is transfixed with sutures at the internal ring and doubly ligated. The sac is then excised. No further hernia repair is needed since there is no muscle weakness. (This is an important *must,* for shifting muscle planes may predispose to later development of direct hernia.) One of two sutures may be used to close the cremaster muscle fibers which were spread to expose the sac. The external oblique aponeurosis is sutured and then the fat and skin are closed. Proper selection of sutures is important. The sac is sutured with fine chromic catgut, although nonabsorbable material is permissible. Muscles are closed with silk or cotton, which is much to be preferred over catgut. The subcutaneous tissue is approximated with fine plain catgut, and the skin with a running subcuticular suture of fine plain catgut. The use of the subcuticular catgut in the skin is desirable since it allows application of a waterproof collodion dressing and does not require removal of sutures—a real fight in a small child. A small dressing may be applied at operation and removed after a few hours when the normal serous ooze has stopped, and the collodion can be applied and the dressing discarded. Postoperative care is simple, and the patient is discharged when he is moving about without undue pain and is able to eat normally. This may vary from the afternoon of operation in small infants (who tolerate the procedure best of all) to the first or second post-operative day in others. Early discharge from the hospital makes it much easier for the parents. Activities of children

are restricted as much as possible for a few days, and full activities are permissible in 3 to 4 weeks.

Following the above routine of prompt operation and early discharge accomplishes several aims: first, an operation which is inevitable is completed with a minimum of interference with normal activities; second, the dangers of incarceration and its complications are avoided; third, the child is relieved of a source of pain or annoyance; fourth, the parents' anxiety and attitude of protectiveness are allayed. This program brings universal satisfaction and gratefulness on the part of the parents, and eliminates a difficult source of trouble for the child.

Results of operation for hernia in infants and children should be uniformly excellent. In a recent review of over 2000 cases at Children's Memorial Hospital in Chicago, DeBoer reported seven recurrences (0.35%) and one death (0.05%). These cases were all done by the simple high ligation method. The usual causes of recurrence are infection which should be very uncommon, sliding hernia, incarcerated hernia, and poor tissues associated with prematurity or congenital inadequacy.

In the past nine and a half years, we have performed 212 operations on 208 children with inguinal hernia. (Table 1) The age spread has been from

TABLE 1

INGUINAL HERNIA IN INFANTS AND CHILDREN
1949-1959

Number of Patients	208
Returned for 2nd Side	4
Total Operations	212
Male	189—(89%)
Female	23—(11%)
Under 1 year old	66—(30%)
Over 12 years old	3—(1.5%)
Right Side	133—(63%)
Left Side	62—(29%)
Bilateral	17—(8%)
Recurrences	0
Deaths	0

two weeks to 15 years of age. There were 17 patients with bilateral herniae operated upon at one stage, while only four of the remainder having unilateral operation have had subsequent operation on the opposite side. Sixty-six patients (or 30%) were less than one year, while only three patients were over 12 years of age. There were 189 males and 23 females (8 to 1), while 133 were on the right, 62 on the left and only 17 bilateral. Eleven patients had frank incarceration, while others presented with a history of recent incarceration. There were 57 associated hydroceles which were excised concomitantly. There were no deaths and no known recurrences in this series, and complications were minimal, consisting of an occasional scrotal hematoma or suture abscess.

As mentioned before, the differential diagnosis involves hydrocele, inguinal adenitis, inguinal abscess and other conditions involving this region. It should not be difficult to distinguish hernia from these conditions. Regarding hydrocele in a child, it should be recalled that this condition is also the result of non-fusion of the processus vaginalis and is closely related to hernia. Usually in children, hydroceles are accompanied by a small indirect sac which often communicates with the hydrocele, giving rise to the situation where a hydrocele seems to vary in size. It is my feeling that hydroceles in children should be surgically excised through the inguinal approach because of the common occurrence of a small hernia above, and that aspiration of hydroceles in children is of little value. In the event that a hydrocele or a long congenital type of hernia surrounds the testicles, no attempt should be made to remove that portion of the sac attached to the testicle because of the resulting bleeding and possibility of damaging the testicular blood supply or the vas. When a small piece of the sac is left in the scrotum no harm will occur. Furthermore, excision of a hydocele is much to be preferred in a child to the "bottle operation" often performed for adult hydrocele.

A final word regarding hernia on the opposite side is important. Perhaps as many as 25% of patients with unilateral hernia have an unsuspected or later discovered contralateral hernia. For this reason some surgeons advocate exploration of the second side after repair of the obvious hernia. In my opinion, the odds are at least 3:1 against finding the second hernia when one is not suspected, and I do not routinely explore the second side. A hernia may develop later on the second side but it can always be repaired then, and the chances are greater that it will not develop than that it will.

To summarize the discussion, a few general remarks can be made. Inguinal hernia is a common, correctable surgical condition of infancy and childhood which is due to a failure of fusion of the *processus vaginalis,* a remnant of the embryonic descent of the testicle from its origin near the kidney to its permanent home in the scrotum. It is invariably indirect owing to its embryologic development and is not cured by trusses or watchful waiting, in contrast to umbilical hernias. The diagnosis is usually made by the parents and must be distinguished by the surgeon from its close relative, the

hydrocele, from inguinal adenitis or abscesses, and from tumors of the same region. The principal danger from hernia in childhood is incarceration, with its complications of strangulation of the bowel, requiring resection, necrosis of the testis or ovary, and post-operative recurrence due to poor condition of the tissues at operation. Prompt operation at the time of discovery, regardless of the patient's age, is recommended, there being no material advantage to be gained by waiting "until the child grows older." Operative repair is accomplished under general anesthesia by simple high ligation and excision of the sac, and discharge from the hospital is allowed at the earliest practical time, usually the day after operation. Results should be uniformly excellent, with rare complications and recurrences. Bilateral operation is indicated only when bilateral herniae can be demonstrated or are suspected. The author's personal experience in private practice is reviewed.

References

Clatworthy, H. W.: Postgraduate Medicine, August 1957.
DeBoer, Arthur: A.M.A. Arch. Surg. December 1957.

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Prolonged Use of Tranquilizer

The tranquilizer chlorpromazine can be given to psychiatric patients for prolonged periods in large doses without harmful side effects, a new study has shown. Shortly after the introduction of chlorpromazine (Thorazine) several years ago, it was realized that the drug could cause damage to the liver, blood, and kidneys, and that some patients would require it indefinitely. A study of 50 patients who took large quantities of the drug for two to four years has shown that none developed side effects, even though their total dosages ranged from 54,000 milligrams to more than a million milligrams.

"The dosage was large enough that it is reasonable to assume that any deleterious effects should be detectable," according to Dr. Frank J. Ayd, Jr., chief of psychiatry at Franklin Square Hospital, Baltimore, who conducted the study. Dr. Ayd reported the study in the March 21st Journal of the American Medical Association.

The study group consisted of 31 women and 19 men, aged 12 to 70 years. Prior to taking chlorpromazine they had been seriously ill from one to 20 years and had not responded to the usual psychiatric treatments. At the beginning of treatment, 13 were hospitalized and 32 were at home. All were totally incapacitated and none had a good outlook for recovery.

None of the patients have recovered from their basic illness, although all have shown improvement in their symptoms. The 18 originally hospitalized patients are now at home; four are working and seven have resumed responsibility for their household duties. Of the 32 unhospitalized patients, 11 have returned to work and 14 are helping with household work.

"It is certain that without chlorpromazine therapy most of these patients would have gradually deteriorated and would now be hospitalized. Instead, chlorpromazine therapy has enabled them to remain outside of a hospital, to work, and to be reasonably comfortable in spite of the persistence of their basic illness."

None of them suffered any serious side effects. Three became sensitive to light, and two-fifths of the women developed menstrual irregularities that eventually cleared. All the patients gained weight during the first year of treatment.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Rocky Mountain Spotted Fever

Rocky Mountain spotted fever is so called because it was first described in Idaho and Montana, where it has probably existed since the first settlement by white men. It seems to have been known to the Indians even before that time. The disease is limited to the western hemisphere but seems to be related to tick-borne diseases occurring throughout the world. It resembles typhus in many respects but is a separate and distinct disease.

This malady has occurred throughout the United States, in Canada and Mexico, and also in some of the South American countries. In 1930, two strains of virus established in guinea pigs from the bloods of cases occurring in rural sections of northern Virginia were studied intensively and were found to be immunologically indistinguishable from strains of Rocky Mountain spotted fever isolated from ticks in the Bitter Root Valley of Montana. The disease has been reportable in Virginia since 1931 and has been recognized in every county in the State except Bath, Bland, Floyd, and Mathews.

The only means of natural transmission to man or to lower animals is through infected ticks. The causative agent, Rickettsia rickettsii, is found in all stages of the tick. These organisms live for long periods in certain ticks and are passed from one generation to another through the eggs. Rabbits, field mice, and other small wild animals maintain the disease in nature and serve as reservoirs for infecting ticks which feed on them.

In Virginia the American dog tick, Dermacenter variabilis, also known as the wood tick, is probably the only vector of Rocky Mountain spotted fever. The adult males and females are oval in shape, approximately one-half inch in length, brown in color. The females are darker and have a larger area of lines, hairs, and other markings just behind the "head". Adult ticks have four pairs of legs. The adult ticks attach themselves to dogs or other animals, usually in late spring and early summer. They may spend several weeks on the host. Females become fully engorged after mating and drop to the the ground, where they lay eggs over a period of two or more weeks. The larvae, or seed ticks, which hatch from the eggs have six legs. They remain on the ground or on low plants until they are able to find a suitable host, usually a field mouse. After a blood meal they drop off and change into nymphs, which resemble the adults. These forms also prefer mice but they may become engorged on larger animals. The change into the adult stage usually takes place in the fall but both nymphs and adults survive through the winter in what may be termed a state of hibernation. These ticks wait on plants for an animal to pass by so that they can attach themselves; consequently, they have limited opportunity for securing a desirable host. Only a small portion finally reaches maturity, even though they may live for long periods of time without food.

A tick must usually feed for six to eight hours before infecting a person. This, together with the fact that only a relatively small number of ticks are infected—perhaps one in three hundred in an area where Rocky Mountain spotted fever has been found —limits the spread of the disease.

The incubation period of Rocky Mountain spotted fever is from three to about ten days. Malaise accompanied by chilly sensations and loss of appetite may precede the onset. There is usually a chill at the onset with general pains referred to the bones, muscles, back, and joints, particularly the muscles of the calf and lumbar regions and in the large joints. Headache is common as well as a short dry cough. The face is flushed and the conjunctivae are injected. After the chill the temperature rises rapidly and continues to rise to 104 to 105 degrees. The rash appears most often on the third day of fever. It is first noted on the flexor surfaces of the wrists, ankles, and back and then on the forehead, arms, legs, chest, and abdomen. The rash is first in the form of rose-colored macules which soon become deep red or purplish, increase in size and often become confluent. At first they disappear on pressure but after a few days persist on pressure and become generally petechial. The rash begins to disappear with the subsidence of fever. The maximum temperature persists throughout the second week, there being slight morning dips, and then

falls by lysis. Normal temperature is reached before the end of the third week.

In typhus the rash appears on the fifth or sixth day after the onset of fever and is noted first on the trunk and later spreads to the extremities. The face, palms, and soles are not involved.

Diagnosis is arrived at by correlation of laboratory findings and the clinical picture. There is no single titer in either the Weil-Felix reaction or the complement-fixation test that is diagnostic of Rocky Mountain spotted fever. It is very important to obtain two specimens of blood from the patient, one as soon as the disease is suspected, the other between the twelfth and fifteenth days after onset. A rising titer points to rickettsial infection. The complement-fixation test is highly specific and may be used to differentiate spotted fever from typhus.

The problem of treating Rocky Mountain spotted fever, as well as all other rickettsial diseases, has been essentially solved since the introduction of antibiotic drugs. Aureomycin, chloramphenicol, and terramycin have proved to be valuable in treating this disease. It is best to administer each dose of the antibiotic orally with a glassful of milk. The antibiotic should be continued for one or two days after the patient becomes afebrile.

PREVENTIVE MEASURES:

1. Personal prophylaxis:
   Avoid tick-infested areas
   Use tick-proof clothing with constrictions at ankles, waist, and wrists
   Remove ticks from the person as promptly as possible without crushing them and with protection to the hands. This is also true in removing them from animals.

2. Reduce the tick population:
   Clear land
   Reduce small wild mammal populations
   Control stray dogs
   Remove ticks from livestock by dipping
   Use insecticides in selected areas.

3. Vaccination:
   Persons whose occupations take them to the woods for hours at a time can be vaccinated against Rocky Mountain spotted fever. They should obtain this protection annually through their physicians.

CAUTION:

Do not remove ticks with unprotected hands. They must be removed by touching them with the end of a lighted cigarette or the head of a freshly blown out match, or by grasping the tick with a pair of forceps and twisting the head and mouthparts free. Do not crush the tick lest the infectious contents be spilled in the wound. Paint the bite with an antiseptic—tincture of iodine is good.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	April 1959	April 1958	Jan.-April 1959	Jan.-April 1958
Brucellosis	2	2	8	4
Diphtheria	1	2	3	11
Hepatitis	29	13	164	101
Measles	3549	4589	8972	9839
Meningococcal Infections	9	3	40	34
Meningitis (Other)	24	12	88	73
Poliomyletis	0	2	2	3
Rabies (In Animals)	15	35	65	158
Rocky Mountain Spotted Fever	0	1	2	1
Streptococcal Infections	1180	789	4650	3177
Tularemia	0	0	6	18
Typhoid Fever	2	1	6	8

Mental Health . . . .

WILLIAM T. SANGER, Ph.D.

Psychiatric Services in General Hospitals

The number of patients admitted to state mental hospitals could be reduced by the utilization of more psychiatric beds in general hospitals and also by using to maximum advantage their associated psychiatric out-patient departments. A big advance in this direction will call for more well prepared psychiatrists. They are a limiting factor both in psychiatric care in general hospitals and in specialized hospitals.

There is now developing concern for the adequate preparation of the family physician in psychiatry to provide better understanding, early diagnosis, and more effective follow-up work during the months following hospitalization or out-patient care. The Commonwealth Fund, New York City, some years ago supported training programs for general physicians in psychiatry and apparently thought well of the results obtained. Recently the Federal Government made available large funds to the National Institute of Mental Health to start financing a program of psychiatric training for general practitioners, including the payment of salaries of physicians who have been in practice for four or more years and give up practice in order to take psychiatric training. The American Psychiatric Association also is concerned with the preparation of general physicians for more participation in psychiatric care. These movements should be applauded.

An impressive committee of the American Medical Association not long ago tailored a new two year intern and residency program for general practitioners. It includes a segment in psychiatry.

As of 1958, in Virginia, 13 hospitals listed 191 regular psychiatric beds with other beds used for psychiatric as needed and in addition 26 hospitals, now without psychiatric beds as such, planned a total of 172 in planned new construction. Thus before too long a total of 39 Virginia hospitals will make available organized services for psychiatric care with a complement of 363 beds. More of such beds likely will be built or set apart as more psychiatrists begin practice where there are no beds now available for mental cases.

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Approved for publication by Commissioner, Department of Mental Hygiene and Hospitals.

One has the impression, though not well authenticated, that the adequacy of out-patient facilities and services is inferior to arrangements for bed care. If true, what a pity when so much can be done to keep psychiatric patients out of the hospital and make early discharge possible by up-to-date clinic services.

But it should be emphasized that while beds and clinics are important, they really have never cured anybody. It takes psychiatrists, psychiatric nurses, social workers, aides, and others. It is to be hoped that our own State Hospital system and our two medical schools will shortly develop a new master plan for jointly preparing more personnel for covering the full range of services.

One handsome, new Virginia general hospital, when dedicated, was unable to open its 32 psychiatric beds because nurses were not available. Unless more students have experience in psychiatric nursing while in school, they can hardly be expected in numbers to enter this aspect of nursing later on.

One of the obvious reasons for psychiatric beds and clinics in general hospitals is likelihood of greater proximity to the homes of patients. This makes easier visiting patients by relatives, friends, and referring physicians. Such proximity makes possible, too, easier integration into the home community after hospitalization or out-patient clinic services. Everyone recognizes this as important.

Various plans and methods of financing psychiatric care outside of state hospital systems have been developed by a number of states. California recently adopted a program under the State Department of Mental Hygiene whereby local governments which qualify will be reimbursed for one-half the cost of in-patient services which meet the standards required.

In Virginia our state and local hospitalization plan under our State Welfare Department could do the same as California, pay one-half of the cost of hospitalization in approved general hospitals. In fact, this is one of the best investments the State could possibly make in order to treat mental illnesses earlier and as close to the homes of patients as possible. Blue Cross and other insurance plans can supplement or supplant State effort substantially.

It may not be easy to educate the general public to support with tax funds an expanding program of

psychiatric care in general hospitals. Its long-range advantages will have to be explained over and over again, that emotionally disturbed and very ill psychiatric patients will more readily enter general hospitals like any other patients, especially if near at hand, that such early treatment is most advantageous, that hospitalization near home maintains family and community ties, that earlier discharge from the hospital and its clinic will usually result, and that in the long run costs, anxiety, and suffering will be reduced.

One of the leading psychiatrists of this continent, Dr. D. Ewen Cameron, Director Allan Memorial Institute, Royal Victoria Hospital, Montreal, Canada, holds that 10 per cent of general hospital beds should be allocated to psychiatry, with outstanding provision for ambulatory patients also. It will likely take any large Virginia hospital years to grow into a 10 per cent census of mentally ill patients. It is, however, not difficult to note a positive trend in that direction. Here is a good opportunity for supportive work.

Antibiotics in Cosmetics

The inclusion of antibiotics in cosmetics is opposed in a report of the American Medical Association. There is no evidence that "constant degerming" of the skin, such as would be presumed to occur with the use of antibiotics in cosmetics, is necessarily always or even frequently desirable," according to the report appearing in the April 4th A.M.A. Journal. The report was written by two New York dermatologists, Drs. Carl T. Nelson and Marion B. Sulzberger, for the A.M.A. Committee on Cosmetics.

Antibiotics are now being used in deodorants to help kill bacteria and thus reduce odor. They have also been suggested for inclusion in face creams and in blemish lotions, according to Veronica L. Conley, Ph.D., committee secretary.

In a note, Dr. Conley said, "The persistent trend toward the incorporation of pharmacologically active ingredients into cosmetics has caused growing concern among the medical profession. . . . Medical experience provides considerable evidence of the health implications in the widespread, prolonged or indiscriminate use of antibiotics."

There is essential agreement that antibiotics generally useful in the treatment of systemic infections should not be used in cosmetics. However, it has been proposed that certain other antibiotics (bactracin, neomycin, polymyxin, and tyrothricin) be permitted in cosmetic preparations.

Even these, which are rarely used other than on the skin, carry certain dangers. Some persons may be sensitive to the drugs and develop allergic reactions from continued contact. In addition, little information is available about the possibly harmful effects of the various antibiotics after absorption through the skin.

The possibility of bacteria becoming resistant to the effects of the antibiotics may be increased through prolonged use of the drugs. This would mean that when the drugs must be used to treat a disease caused by a resistant strain of bacteria, they would be ineffective.

In conclusion, the report said, "Except for the deodorant action of such agents in reducing axillary odors, their incorporation in cosmetics has not been proved to be of specific value, and their widespread use in cosmetics could well represent an increased risk to general public health as well as to certain hypersensitive individuals."

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Beds—Not Enough? Too Many?

"The public should exercise better control over its capital investment in hospitals. . . . The quality of care is, of course, in the hands of physicians and the professions concerned with hospitalization. . . . But the public is entitled to control the expenditures. . . . Any community should view with alarm the expansion of hospital facilities except in response to a recognized immediate or future need."[1] Published in the year 1930, the foregoing statement referred to widespread activity in hospital construction during the preceding decade, when community coordination was not taken seriously. Times have changed—hospital planning now is, or indeed should be, a primary concern not only of local hospital bodies but of authorities and organizations which are in a position to effectuate State-wide coordination —The Medical Society of Virginia, for example.

Because health care is such a fast-changing complex of activity in America, with different developments pointing in different directions, the future of hospitals and of medical practice cannot be foreseen. We cannot rest assured that the public will continue to pay whatever is required to maintain health care on a voluntary basis. On the other hand, we need not agree with those who say that we will all be taken into socialized medicine in the next few years. It depends on what doctors, hospital people, and others in the health field do in the meantime. The doctors of each state, individually and—perhaps more effectively—through their medical societies can influence the future of health care by influencing the future development of hospital facilities.

Not too many years ago the hospitals of Virginia did a remarkable job of meeting needs for hospital-care despite what were then properly recognized as acute bed-shortages. But many beds have been constructed in the interim, and it might be that the era of shortages has come to an end. There is reason to believe that it has. As a matter of fact, there is a possibility that Virginia will have a costly surplus of beds if too many of those already in sight are put into service too soon; careful state-wide planning is needed if we are not to go from one extreme to the other.

There is a plethora of evidence that the rising costs of hospitalization are making more and more people believe—rightfully or wrongfully—that those costs should be placed under other than voluntary regulation. Because of the constant over-head expenses involved, each and every hospital bed beyond absolute need—be it unused or misused—unnecessarily adds about $7,500 to Virginia's total annual hospital bill. Accordingly, a major factor in holding down future hospital costs will consist of not building more hospital facilities than are actually needed.

Many of the existing hospitals in Virginia draw their patients from a wide area. Therefore, bed additions by one hospital may reduce the patient load of a number of other hospitals throughout the area, leaving these other hospitals with a Hobson's choice —to accept the expense of supporting beds in idleness, or to accept as bed-patients those whose condition does not require or justify bed-care. In either case the over-all hospital bill for Virginians increases.

Not only hospital beds but also hospital services should fit into the state-wide, coordinated health-care scheme. The addition of expensive hospital services when such services are available in adequate measure in neighboring hospitals is just as wasteful of the health-care dollars of Virginians as is the addition of unnecessary beds.

How many existing beds are—or may be—unnecessary? The fact that the existing beds are kept in use is no criteria on which to base an answer, nor is the fact that a given hospital may be unable to admit all comers on a given day. An apparent need for more beds might well be satisfied were the hospitals to provide proper facilities for private ambulatory patients; conversely, construction of such facilities might well prove that many existing beds are unnecessary. All too few hospitals in Virginia offer proper facilities to which physicians can refer their private ambulatory patients for x-ray examinations, laboratory tests, and diagnostic work-ups. These private vertical patients should, of course, be received in adequate waiting rooms on an appoint-

1. Rorem, C. Rufus. The Public's Investment in Hospitals. University of Chicago Press, 1930, p. 216.

ment basis, and the doctor should be provided with suitable space for consultations. We must discard the anachronistic idea that out-patient facilities are for indigent patients.

The various health-care activities of our hospitals need to be orchestrated not only in local communities but also on a regional and on a state-wide basis. Virginia must, of course, have enough hospital beds, but care should be taken to avoid the needless expense of too many. In its attempt to control its capital investment in hospitals, the Virginia public leans heavily upon the advice of Virginia doctors; accordingly, through our various organizations and societies, we should subject existing hospital facilities and services to a thorough-going and objective analysis in order to give truly astute advice to the public we are dedicated to serve.

If we consider that socalized medicine is not a good system, and is not inevitable, then we are committed to positive programs of study of the shortcomings of our present system, and positive programs toward the alleviation of these shortcomings. Because of the number of dollars involved, and because of the public's obvious concern, perhaps the best place to start is with our hospital facilities and services.

Cold Vaccine Predicted

A vaccine which will prevent from 60 to 70 per cent of all common colds will probably be available within the next 24 months, an expert in cold research has predicted. "I realize that I have stuck my neck out," Dr. Thomas G. Ward, professor of virology at Notre Dame University, South Bend, Ind., said. However, he believes that a vaccine can be developed against "an acceptable proportion of the common colds."

In an interview, reported in the April Today's Health, published by the American Medical Association, Dr. Ward said he does not believe that common colds will be wiped out, even with an adequate vaccine. "People are not going to take the vaccine, just as they are not taking polio vaccine . . .," he said. "People are people and we have great difficulty in selling preventive medicine. The prevention of disease is not as glamorous or as consuming to the individual as his actual illness."

From 75 to 80 per cent of common colds are caused by a group of viruses or a group of ordinary bacteria of the streptococcus type. Others may be allergy-symptom colds or psychosomatic. Viruses are protein substances that cannot be seen, even through a microscope. While related to the one-celled bacteria, viruses are not considered to be living bodies in themselves; they have the peculiar ability to live only in the presence of growing material. In addition to colds, they cause such diseases as measles, chickenpox, poliomyelitis, and rabies. Vaccines composed of dead or "tamed" viruses may be injected into the body and cause it to develop resistance against invasions by the viruses.

Dr. Ward defined a common cold as one wherein the individual has a runny nose two days in succession. This is the nasal type cold which causes the lining of the nose to become reddened and inflamed. No fever is associated with it and it is the kind that may be spread easily to other people.

There is no drug now on the market that could be termed effective against common cold viruses. Colds caused by bacteria may respond to antibiotics and allergy-caused colds may respond to antihistamines.

Until an effective cold vaccine is developed, about the only way to keep from catching cold, is to "follow the usual health measures such as keeping warm and dry, and well-fed. If possible stay away from those who have colds."

The Medical Society of Virginia ....

Social Security and Your Delegates to AMA

The delegates of The Medical Society of Virginia to the AMA would like very much to know just how the majority of the members feel about social security coverage for physicians. It is often difficult to know how to vote on resolutions bearing on this subject.

It is interesting to note that, in recent years, many states have polled their members and found that about half are for coverage and half against. It becomes even more interesting when consideration is given the fact that eighty per cent of the physicians voting were not familiar with either the Social Security Act or the Keogh-Simpson bills.

Your delegates hope that the following articles will help acquaint the membership with both sides of the controversy and make individual members better qualified to render an opinion.

Social Security for Physicians

When our present system of old-age and survivors insurance was begun in 1937, its benefits were limited by law to wage earners in industry and commerce. Several acts of Congress, beginning in 1950, have broadened the act so that now all those who work for a living are covered except physicians and a very small minority of ministers who have elected not to be included. Physicians are excluded because the American Medical Association has vigorously opposed their inclusion. This opposition has been supported by many arguments, namely that few physicians retire completely from practice, those who do have usually made their own arrangements for a retirement income, the actuarial base is unsound, the program is likely to go bankrupt without direct subsidy from Congress, and Social Security is a form of socialism and is therefore undesirable.

To the inquiring observer the thesis that doctors are so different from persons in all other occupations in their need for old age insurance, that they require special consideration, seems naive and hard to justify logically. In several states and local areas in the United States physicians have taken a second look at what inclusion within the Social Security set-up would mean to them and have voted in formal and informal polls to reverse their former stand and to ask Congress to be included.

What would happen—in terms of dollars and cents—if physicians were covered? The following figures are presented in a simplified form and are to some extent approximations. At present a physician would pay an annual self-employment tax of $180.00. This amount is scheduled to be increased at 3 year intervals until in 1969 the maximum of $312.00 per year is reached. The maximum that a physician in the future might contribute over a period of practice from age 27 to 72 would be approximately $14,000.00.

In return, what may the physician expect in terms of protection? If he retires at age 65, he and his wife receive $174.00 per month for life. If he dies first, his widow receives $87.00 per month. If he continues to practice after 65, his benefits do not begin until the age of 72, but after 72 he is entitled to his full retirement pay whether he practices or not, regardless of how high his income from practice may be. If disabled after the age of 50, monthly benefits begin and extend through life.

Perhaps the most important single feature is the benefit payable to the family of a young physician who dies a few years after beginning practice. Many of these men have not had sufficient time to build up an estate or to acquire enough life insurance for family protection. The widow with children receives a monthly income until the youngest child reaches the age of 18. This monthly payment varies from $115.00 per month for a widow with one child to a maximum of $254.00 for a widow with four or more children. It is readily seen that the total benefits in such a case could run into many thousands of dollars.

The most damaging of the many criticisms leveled at Social Security by the A. M. A. and other critics

have been those involving the actuarial soundness of the program. This criticism is answered in detail by the recent report (January 1959) of the Advisory Council on Social Security Financing, a body provided for by the 84th Congress and made up of representatives of employers, employees, and the public. The roster of this council is a distinguished one, and includes among its thirteen members Reinhard A. Hohous, Vice President and Chief Actuary of the Metropolitan Life Insurance Company, Dr. Carl Fischer, Professor of Actuarial Mathematics and Insurance at the University of Michigan, and Malcolm Bryan, President of the Federal Reserve Bank of Atlanta. The unanimous conclusion of this group, after a year of study is as follows:

"The Council is pleased to report that according to the best cost estimates available the contribution schedule now in the law makes adequate provision for meeting the cost of the benefits provided. We have found that the method of financing is sound and that no fundamental changes are required or desirable."

Middle aged and older physicians may be interested in contemplating the fact that after paying the self-employment tax for a minimum of six quarters (1½ years), they are then eligible for the same benefits as if they had paid their tax for twenty years. For physicians now over 60 this could prove to be a high-paying investment. Young physicians, on the other hand, would do well to read their insurance policies and retirement income contracts to see how little protection, comparatively, they can buy for $312.00 per year from private companies.

All physicians should be reminded that for many years they have been paying for Social Security for others, directly, when they pay their office assistants, and indirectly when they purchase almost any commodity. Perhaps the time has come when they should do as well for themselves as they are doing for others. We might well consider whether the time has come for us to leave our conspicuous but not too rewarding role of insisting that "They are all out of step but Jim".

Edwin A. Harper, M.D.

Social Security—The Darker Side

The medical profession has never hesitated to take a firm stand on matters having to do with free enterprise, individual initiative and all the other principles which have made this nation great.

It goes without saying that you cannot take a stand without sometimes having to fight to preserve it. The profession has taken on some pretty big opponents in recent years, including Harry Truman, Oscar Ewing, and Amie Forand, but one of the very toughest has been its own self. The issue involved is whether physicians should be covered by Social Security and the fight is being waged over such things as security, conscience, integrity and logic.

It is difficult indeed to imagine why physicians, of all people, would voluntarily agree to accept even a "little bit" of socialism—not to even mention such a "big chunk" as Social Security. The answer, therefore, must have something to do with security. Every human being, upon reaching maturity, quite naturally casts an eye to the future. It is only proper that an individual should be concerned about his retirement years and the problem of adequately caring for his loved ones during that period. But, it is becoming increasingly clear to those who study the matter carefully, that the answer is not Social Security.

Let us take a little closer look at this thing called Social Security and see what we actually have. First of all, Social Security is not actuarially sound. One does not have to be schooled in the principles of economics to visualize what will probably happen when the full impact of the program is felt some twenty or thirty years hence. In 1952, retired OASI beneficiaries were receiving an average of $24.00 in benefits for each fifty cents paid in taxes while working. In 1954 the ratio increased to $30.00 for each fifty cents and 1956 brought another sharp rise. OASI liability for current and future benefits are estimated at well in excess of 300 billion dollars. That liability will undoubtedly continue to increase —especially since the program is moving steadily into the fields of disability benefits and hospital and medical care.

It would also seem that an individual sincerely interested in security would be much better off under a true insurance contract. He knows exactly what his premium will be, the benefits to be derived and the duration of coverage. In other words, he knows exactly what he will be paying and what his family will some day be receiving. This is not true under Social Security. The individual covered has no policy, no contract—in fact no guarantee of anything. The tax base and tax rate are being raised steadily and, according to laws already on the books, will be doubled between now and 1975. It should be remembered that these rates can be further increased any time the Congress desires. Benefits can also be raised, lowered or eliminated entirely depending upon any number of factors. This is certainly not

insurance. Rather, it is a tax supported dole. More than that, it is socialism in its purest form.

It is frightening to realize that very little (perhaps 7%) of the estimated liability of the Social Security program is theoretically backed by reserves. It is generally acknowledged that most of the Social Security tax monies have been used to pay other government expenses over the past twenty years. It makes one almost shudder to think what this type of deficit finance will lead to. The answer, of course, is taxes, taxes, and more taxes. The House of Delegates of the AMA has held that the profession cannot oppose the Forand and other social legislation now pending before the Congress, and then vote to climb on the "social bandwagon" through the medium of Social Security. Such inconsistency can only cause distrust.

When all the factors are taken into consideration, it certainly seems that our future generations will face the highest social security and income taxes imaginable. It is also conceivable that the entire program will collapse completely. The logical answer, as far as physicians are concerned, can be found in the Keogh-Simpson bills. These bills would permit a physician to set aside a certain percentage of his income (tax free) for retirement purposes. This would permit him to invest in a retirement program tailored to his own personal needs. It would also encourage thrift and discourage inflation and dependence upon the federal government.

Space does not permit a detailed comparison of Social Security and private insurance policies. However, there is no doubt but that a physician can obtain protection, tailored to his family's needs, for less than he would have to pay over the years into the Social Security program. It would be well for each physician to sit down with his personal insurance counselor and get a detailed comparison between private insurance plans and Social Security.

The subject of Social Security is admittedly complex, and involves countless different facts, figures and viewpoints. It is the author's sincere hope that every member of The Medical Society of Virginia will "think for himself" and not be pushed pell mell down the road to socialism. The price for a government handout may be greater than you think. It could be more than money—it could be freedom!

W. Linwood Ball, M.D.

Toy Balloons Stop Gastric Bleeding

Toy balloons in the hands of skilled physicians are now saving the lives of persons suffering from massive stomach hemorrhages.

Writing in the April 4th issue of the Journal of the American Medical Association, four physicians from the University of Minnesota Medical School at Minneapolis reported that they have used the ordinary dime store rubber balloons successfully to stop duodenal ulcer bleeding in nine patients without recourse to surgery.

The technique, based on exhaustive preliminary research with animals, is comparatively simple. The empty balloon, wrapped about the end of a long tube, is passed into the patient's stomach and inflated. With the aid of an intricate machine, a cooling solution, consisting of equal parts of ethyl alcohol and ice-cold water, is circulated through the balloon. Constant temperature and circulating volume is controlled by the machine.

The cooling, which has been carried out in anesthetized animals for 48 hours and in man up to 125 hours, virtually stops gastric digestion and, in turn, also stops the hemorrhaging. As soon as the bleeding appears to be stopped, the machine is shut off, the balloon deflated and removed from the stomach, and the patient is carefully watched for a recurrence of symptoms.

The doctors—Owen H. Wangensteen, Harlan D. Root, Peter A. Salmon, and Ward O. Griffin, Jr.—said that from their observations the gastric cooling technique "holds promising therapeutic value in the management of massive hemorrhages from peptic-ulcer-linked conditions of the duodenum [the small intestine leading from the stomach], the stomach and the esophagus."

Altogether the cooling procedure has been used so far on 19 patients with different types of gastrointestinal bleeding. The majority of patients were in shock despite blood transfusions and their conditions were too poor for emergency surgery. Fifteen of the 19 patients required no further treatment.

The Medical Society of Virginia
Membership Roster

May 1, 1959

This roster is published as a service to the membership and your editors hope you will find it a handy and ready reference.

Although the list has been checked carefully, the State Office would appreciate being advised of any omissions or errors. Addresses shown are those used by the State Office for mailing purposes.

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Mrs. Maynard Emlaw, Richmond

Richmond.

The March meeting of the Woman's Auxiliary to the Richmond Academy of Medicine was held at the Branch House. Following luncheon, Miss Mabel Montgomery, secretary-treasurer of the State Board of Nurse Examiners, spoke on "Types of Programs Available to Nurses". Miss Montgomery described three programs: the 4-year college degree course; the 3-year hospital diploma course; and the 2-year college-centered diploma course.

We heard a report on the fine work carried on by Mrs. Adney K. Sutphin and Mrs. Thomas Walker in presenting monthly programs for nurse recruitment to high school girls in the Richmond area. The programs include speakers, films, visits to hospitals, etc.

At the April meeting, our speaker was Dr. W. R. Bond, medical consultant for the A. H. Robins Company. He spoke on "Plant Drugs and Herbs" and told of the development of drugs from many common plants and herbs, as well as from those less well known, illustrating his talk with amusing stories.

On April 22nd, the Richmond Area Cancer Society held a cancer conference for nurses at the Academy of Medicine. Our Auxiliary was co-sponsor. Mrs. George K. Brooks was in charge and Mrs. Irwin Rifkin in charge of the tea.

On April 25th, the Auxiliary held a dance, followed by breakfast, at the Commonwealth Club, honoring Doctor's Day for members of the Richmond Academy of Medicine and their wives. Mrs. F. Elliott Oglesby and Mrs. William P. Morrisette were in charge of decorations. The theme was Spring Gardens and April Showers. Chairmen for Doctor's Day were Mrs. Richard N. Baylor and Mrs. William A. Young.

Edith Hawkins
(Mrs. J. Henry)

Northampton-Accomac.

The Auxiliary to the Northampton-Accomac Medical Society held its spring meeting at the home of Mrs. Walter A. Eskridge at Parksley on April 14th, with eighteen members and two guests present. The guests were Mrs. Charles A. Easley, Jr., and Mrs. Walter A. Porter, president and president-elect of the State Auxiliary. Mrs. R. K. Brown welcomed the guests and then gave details of the Doctor's Day party.

The Auxiliary announced contributions to the Student Loan Fund and the Leigh-Hodges-Wright Memorial Fund. They were also asked to support the Crippled Children and Sheltering Arms Hospitals.

Mrs. Easley gave a report on the Auxiliary Workshop, reporting its success as a step forward in Auxiliary work and one of the vital projects of the American Medical Association.

The July meeting of the Auxiliary will be held at the home of Mrs. John R. Freeman at Cape Charles.

Catherine Rush Trower
(Mrs. Holland)
Chairman, Press and Publicity

Alexandria Auxiliary

On January 31 a delightful dinner-dance was held at Rose Hill Farms, arranged by the Alexandria Medical Auxiliary, with 44 couples attending. Mrs. Milton Stein was chairman of arrangements.

The Alexandria Auxiliary have organized several bridge groups who are now playing in a Bridge Marathon, proceeds to benefit the new Alexandria Hospital. A similar program, though on a somewhat smaller scale, was accomplished last year.

The March meeting of the Alexandria Auxiliary was held at the home of Mrs. Arthur Linden, with Mrs. Conrad Gossels serving as co-hostess. Dr. Thomas McGough, Director of Public Health of Alexandria, spoke concerning safety in the home, stressing the importance of the safe-keeping of poisons and medicines.

This year Alexandria acted as host to Arlington and Fairfax Auxiliaries at the annual joint luncheon held April 30th at Bell Haven Country Club, Alexandria. Fashions were presented by Toni Lee Shop, Arlington. Guests included Mrs. Charles Easley, Jr., Danville, State President of the Woman's Medical Auxiliary, and Mrs. Walter A. Porter, Hillsville, State President-Elect.

Miscellaneous....

Security's Jackpot

By Robert Ruark

I was so happy I sat right down and cried the other day when I read the newest Social Security tidings, which seem to be taking effect in 1959. If you happen to make it until age 72, you can earn a million dollars a year and still pick up the six bucks the SS people give you. But you got to hit that hard 72 before you can legally earn more than $1,200 a year and still collect the stipend the government so graciously grants you.

Social Security to me has always had a wonderful air of Alice in Wonderland about it. In the first place, nobody asked for it. The government forced it on you. The idea was that Uncle Sam would wallop you for a portion of your earnings, and your employee would get stabbed for a matching amount.

Then, after using your money and your employee's money for a lot of years to improve the plight of the world at large, the idea was that if you managed to hit 65, the government would start paying you back. The payments would vary according to what you and the boss contributed. But there was a clinker.

If you got the SS payments, you couldn't earn more than $1,200 a year without forfeiting your rightful accruals. The government set an arbitrary limit on your outside earning capacity. And for what reason, pray tell?

You paid in the money. You have received neither interest nor capital return on it. It was your money, and the boss's money. I see no real reason why you couldn't get your end back, in a lump, if you wanted it that way, and why the boss couldn't get his hunk back, if he wanted it that way. They must keep some sort of books in Washington, D. C.

The SEC would be the first to jump on private enterprise which took money from stockholders or an investment trust which is run as arbitrarily as Social Security. Fraud would be a light term to apply to hijacking a payroll without consent, using the money without interest, and then demanding that the money go unpaid if outside earnings exceeded a certain amount.

It is no business of the government to tell you how much you can earn after formal retirement. A healthy man of 66 is capable of earning as much as he can earn. If the money were an outright dole, the government might have a point, but it basically consists of savings by employee and employer, money stripped from pay checks and profits.

I would like to challenge the legality of Social Security. And someday, when I have time, I would like to sue to get my impounded dough back, since for some years I have not been employed except by me, and might want to buy a race horse or a harem with the dough I'll never see unless I live to be 65, which looks bloody unlikely, the way the world is running.

The whole structure of Social Security was born in decency and providence, but somebody goofed on the bylaws. And until they remove the nonsensical restrictions on how much a person can earn while receiving belated interest on the jack he is rightfully entitled to—until they can clarify an individual's right to get his paid-out money back, at a reasonable interest, the whole blooming thing is unconstitutional, illegal, and in forceful restraint of free trade.

(This article was published in the Norfolk Virginian-Pilot in the year 1958. It is being reprinted with the permission of United Feature Syndicate. Copyrighted 1958.)

Book Announcements . . . .

Book received for review are promptly acknowledged in this column. In most cases, review will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Modern Chemotherapy of Tuberculosis. by ROBERT S. MITCHELL, B.A., M.D., F.A.C.P., and J. CARROLL BELL, B.S., M.D., M.S., F.A.C.P., The Colorado Foundation for Research in Tuberculosis and the University of Colorado School of Medicine, Denver. Foreword by William B. Tucker, M.D. A Publication of Medical Encyclopedia, Inc., New York. 1958. viii-109 pages. Cloth. Price $4.00.

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Streptomycin and Dihydrostreptomycin. By LOUIS WEINSTEIN, PH.D., M.D., Professor of Medicine, Tufts University School of Medicine; Lecturer on Infectious Disease, Harvard Medical School; etc. And N. JOEL EHRENKRANZ, M.D., Assistant Professor of Medicine, University of Miami School of Medicine; Chief of the Infectious Diseases Section, Jackson Memorial Hospital, Miami. Foreword by by Chester S. Keefer, M.D. A Publication of Medical Encyclopedia, Inc., New York. 1958. xi-116 pages. Cloth. Price $4.00.

* * * * *

Chloromycetin (Chloramphenicol). By THEODORE E. WOODWARD, M.D., and CHARLES L. WISSEMAN, JR., M.D., University of Maryland School of Medicine, Baltimore. With the Collaboration of Harry M. Robinson, Jr., M.D., George Entwisle, M.D., Fred R. McCrumb, Jr., M.D., and Merrill J. Snyder, Ph.D. Foreword by Joseph E. Smadel, M.D. A Publication of Medical Encyclopedia, Inc., New York, 1958. xiv-159 pages. Cloth. Price $4.00.

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Penicillin. By HAROLD L. HIRSH, M.D., and LAWRENCE E. PUTNAM, M.D., Washington, D. C. Foreword by Harry F. Dowling, M.D. A Publication of Medical Encyclopedia, Inc., New York. 1958. xi-148 pages. Cloth. Price $4.00.

* * * * *

Clinical Obstetrics and Gynecology. Volume 1, Number 4. Symposium on Operative Obstetrics. Edited by J. Robert Willson, M.D. Symposium on Genital Cancer. Edited by Daniel G. Morton, M.D. Paul B. Hoeber, Incorporated, New York. Quarterly Book Series sold by subscription only $18.00.

* * * * *

Amino Acids and Peptides with Antimetabolic Activity. Ciba Foundation Symposium. Editors for the Ciba Foundation G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1959. xii-286 pages. With 28 illustrations. Cloth. Price $8.75.

* * * * *

The Sedimentation Rate of Human Erythrocytes. Its Basic Concepts. Its Value as a Differential Diagnostic Agent. Its Multiple Clinical Applications. By FRANK WRIGHT, M.D., F.A.C.P., F.A.S. Vantage Press, New York. 1959. 43 pages. Cloth. Price $2.50.

* * * * *

Centaur. Essays on the History of Medical Ideas. By FELIX MARTI-IBANEZ, M.D., Professor and Director of the Department of the History of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals, New York; Editor-in-Chief of MD Medical Newsmagazine. MD Publications, Incorporated, New York. 1959. xvii-714 pages. Cloth. Price $6.00.

Communicable Diseases Transmitted Chiefly Through Respiratory and Alimentary Tracts. Medical Department, United States Army, Preventive Medicine in World War II, Volume IV. Prepared and published under the director of Major General S. B. Hays, The Surgeon General, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., M.C.; Editor for Preventive Medicine, Ebbe Curtis Hoff, Ph.D., M.D.; Assistant Editor, Phebe M. Hoff, M.A. xxi-544 pages. Illustrated. Cloth. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $5.50. (Buckram).

* * * * *

Now or Never. The Promise of the Middle Years. By SMILEY BLANTON, M.D., and ARTHUR GORDON. Prentice-Hall, Incorporated, New York. 1959. 273 pages. Cloth. Price $4.95.

* * * * *

Neurosurgery. Volume I. Medical Department, United States Army. Surgery in World War II. Prepared and published under the direction of Major General S. B. Hays, The Surgeon General, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., MC. Editions for Neurosurgery, R. Glen Spurling, M.D., Barnes Woodhall, M.D., and Associate Editor, Elizabeth M. McFetridge, M.A. Office of the Surgeon General, Department of the Army, Washington, D. C., 1958. xix-466 pages. Illustrated. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., Price $5.00.

* * * * *

General Urology. By DONALD R. SMITH, M.D., Clinical Professor of Urology and Chairman of the Department of Urology, University of California School of Medicine, San Francisco; etc. Illustrated by Ralph Sweet. Second Edition. Lange Medical Publications, Los Altos, California. 1959. 328 pages. Price $4.50.

* * * * *

Therapeutic Radiology. Rationale, Technique, Results. By WILLIAM T. MOSS, M.D., Chicago, Assistant Professor Radiology, Northwestern University School of Medicine; Director, Department of Therapeutic Radiology, Chicago Wesley Memorial Hospital; Chief, Department of Therapeutic Radiology, Veterans Administration Research Hospital. With Foreword by Lauren V. Ackerman, M.D. The C. V. Mosby Company, St. Louis. 1959. 403 pages. With 146 illustrations. Cloth. Price $12.50.

* * * * *

Textbook of Surgery. Edited by H. Fred Mosely, M.A., D.M., M.Ch.(Oxon), F.A.C.S., F.R.C.S.(Eng.), F.R.C.S.(C), Assistant Professor of Surgery, McGill University; Associate Surgeon, Royal Victoria Hospital, Montreal, Canada. Third Edition. The C. V. Mosby Company, St. Louis. 1959. xxi-1336 pages. With 738 text illustrations and 108 color plates. Cloth. Price $17.00.

* * * * *

Maternity. A Guide to Prospective Motherhood. By FREDERICK W. GOODRICH, JR., M.D., Illustrated by Victor Mays. Prentice-Hall, Inc., Englewood, N. J. 1959. 130 pages. Cloth. Price $1.75.

* * * * *

A Doctor Discusses Menopause. By G. LOMBARD KELLY, A.B., B.S. Med., M.D., President Emeritus and formerly Professor of Anatomy, Medical College of Georgia; Formerly Research Associate in Anatomy, Cornell University Medical School; etc. The Budlong Press, Chicago. 1959. Paper. Patient Price $1.50.

President's Message . . . .

THERE ARE CHANGES going on today in the physician-patient relationship. This relationship has always been represented as the deep trust of the patient for the skill and integrity of the physician. I believe this faith has been shaken in many patients. But this is not due to any change in the skill and integrity of the medical profession. This loss of faith has been due to our haste with many patients who seek some medical explanation of a given problem. This is the basis of much misunderstanding.

Over some years our curious public has been teased toward becoming medical thinkers and even in making medical decisions, by the recent floods of magazine articles supposed to enlighten said public. The aphorism that knowledge is strength is very true. But such loosely learned medical knowledge can be quite confusing to a patient when applied to himself by himself. A feeling of doubt is created. The trust in his physician slips a little when he puts on a thinking cap along with his physician. Under these conditions unhurried time for answers and explanations becomes a necessity. The physician may be behind in his time schedule but a moment to practice the art of medicine just then is as important as the application of the sciences at their proper time.

Such patients with "a little knowledge" and with less faith in their physicians than formerly, should be reclaimed. There is still time in this hurried world for showing a sketch or a diagram to satisfy an anxious patient. A couple of minutes taken to explain some condition will immediately create a feeling of mutual confidence. For the physician to assure himself of the good will and satisfaction of his patient, just by spending one such minute before dismissing each and every patient, will open up many avenues of friendly physician-patient relationships.

Such action is not taught in medical schools, but is usually devised somewhere along the line, and subconsciously practiced by successful clinicians. In this way we can stop haste from knocking on the pedestal which the physician has traditionally occupied.

Walter O. Adams

President

Editorial....

Of Colons and Elephants

A GOOD INTERNIST FRIEND of mine recently had under his care several patients dying of carcinomatosis secondary to carcinoma of the colon. He was naturally discouraged and came out with the remarkable statement, "Do you really think it is worthwhile operating on cancer of the colon and rectum?" While I was sure he was half-joking, I was also afraid he was half-serious. I felt that cancer of the colon carried a better prognosis than most internal cancers, and that the picture was far from discouraging. The thought then occurred that perhaps the family physician and the internist are seeing in their followup primarily the patients who do have recurrence. These physicians are the ones frequently called upon to face the disheartening task of giving terminal care in the home. The surgeon, on the other hand, in his office and in tumor clinics, is seeing the well patients on routine check-up, and, as a result, has a much more optimistic feeling. He is dealing primarily with the successes. Undoubtedly we are feeling different parts of the elephant, and perhaps a brief review of the overall results would be helpful to both of us. Surely the truth lies in between, but where?

In the first place, the resectability rate in 1920 was around 50% and is now over 90%. This is due slightly to earlier diagnosis but, to a much larger extent, to a change in the definition of resectability. In 1920 resections were done for cure; colostomies for palliation. As the operative mortality rate was lowered, more and more colon resections were performed for palliation, even in the presence of distant metastases. Palliative resection is frequently wise as greater relief is given than with colostomy, and there is some evidence that the rate of growth of the metastases is slowed by the removal of the primary tumor. These cases, of course, cannot be considered to be performed for cure. A true resectability rate for cure varies from 50% to 70%. A five-year survival without evidence of recurrence in those patients who underwent the curative operation is generally reported to be 50 to 60% from the larger clinics. This gives only about 30% of an overall five-year survival in the entire series of colon malignancy. This is certainly not good—not as good as I had thought—but a good deal better than my internist friend thought.

Of 100 consecutive cases of colon and rectal cancer treated at the Jefferson Hospital, 26 had distant metastases when first seen and six additional cases were inoperable for cure because of the extensive local spread.

What can be done to improve the rate of cure? Surgery of the colon has gradually become more radical, but further extension of this principle is not the answer. Mor-

Current Currents

PHYSICIANS, seeking tax refunds for educational expenses, may file on Form 843 or submit amended returns. Such actions must be taken within three years from the time their returns were normally due.

A new interpretation by the U.S. Tax Court of Section 162 of the 1954 Code permits the deduction of costs of education undertaken by a taxpayer for the primary purpose of (1) "maintaining or improving skills required in his . . . trade or business. . . . If it is customary for other established members of the taxpayer's trade or business to undertake such education, the taxpayer will ordinarily be considered to have undertaken this education for the purpose described in subparagraph (1) of this paragraph."

The Commissioner of Internal Revenue had, in interpreting these regulations, placed emphasis on whether the education was "customary". The U.S. Tax Court, however, in a more liberal interpretation, rejected the Commissioner's emphasis and stressed the taxpayer's "primary purpose" for the education.

PRESIDENT EISENHOWER has, during the past year, repeatedly called attention to the cost of veterans' benefits, overlapping with other federal and local programs and the decreasing service-connected patient load. In this connection, the President has indicated that the following policy will govern his future approvals for construction or acquisition of Veterans Administration hospital beds:

"(1) Continuance of complete, high quality hospital care for service-connected disabilities. Such care will be provided in hospitals of the Veterans Administration, other Federal hospitals, and local community hospitals in the discretion of the Administrator. (2) Continuance, within the capacity of the 125,000 authorized beds in Veterans Administrations hospitals, of the care of war veterans with non-service-connected disabilities, recognizing that basic responsibility lies with other governmental jurisdictions for providing hospital care for all citizens who are unable to defray the expense of hospitalization. (3) Shifting of beds or hospitals from one type of use to another by the Administrator of Veterans' Affairs as may be permitted by law and advances in medical treatments. (4) With the approval of the President and subject to the availability of funds, construction to provide beds or hospitals for replacement and modernization or to compensate for major geographic shifts in veteran population, all within the overall total of 125,000 authorized beds."

THE SENATE FINANCE COMMITTEE was expected to commence hearings on H.R. 10, 86th Congress (Keogh-Simpson Bill) sometime around the latter part of May. This Bill reached the Senate too late in the second session of the 85th Congress to permit Senator Byrd, the Committee Chairman, to schedule hearings.

A NEW AND STREAMLINED auto-crash injury study will soon begin in some Virginia counties. The study is administered by Cornell University with the cooperation of the Virginia State Police, Department of Health, and local physicians. The first study will begin on July 1 and will terminate on December 31. Some physicians in the following counties might possibly be called on to complete accident report forms: Augusta, Brunswick, Dinwiddie, Highland, Greensville, Lee, Lancaster, Nelson, Essex, Richmond, Scott, Sussex, Prince George, Northumberland and Westmoreland.

THERE IS GROWING CONCERN that if a completely accurate audit could be made of U.S. assets and liabilities, the picture would not appear quite as rosy as painted. Those most concerned point to the following: (1) The national debt of $285 billion and the fact that it is increasing, year by year. (2) The Government's contingent liabilities, which amount to another $200 billion. (3) The fact of serious inflation, which has reduced the purchasing power of the dollar to less than 50 cents. (4) The growing difficulty of finding buyers for Government bonds and the flight from the dollar. (5) The growing difficulty of the states and localities in finding money to pay for necessary (and unnecessary) services.

THE NATIONAL LEAGUE FOR NURSING has announced that the Commonwealth Fund is providing continuing support for the NLN Fellowship Program. This program provides generous fellowships for nurses possessing superior ability and leadership qualities and who are engaged in programs of advanced study. During the five years of its existence, 126 fellowships have been granted—95 for fellows engaged in doctoral study and 31 for those studying at the masters' level. It is hoped that nurses who have demonstrated their abilities and leadership qualities will be encouraged to avail themselves of this unique opportunity.

DID YOU KNOW that six physicians were among the 56 persons who signed the Declaration of Independence? Included was the very eminent Benjamin Rush of Philadelphia.

MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION are reminded that AMA dues are delinquent after June 1.

tality rate through the years has been tremendously lowered, and this, too, has been of help, but marked improvement in the overall survival rate is not to be gained here. The one area in which improvement can be hoped for is in earlier diagnosis, and this is the responsibility of every physician. While it might be theoretically wise to perform routine sigmoidoscopic examinations and barium enemas at certain set intervals on the entire population, the present supply of physicians preclude the routine use of these time-consuming procedures, nor would this be economically feasbile. Certainly, however, every patient should be questioned concerning his bowel habits and the size and color of the stools, and further investigation instituted where there is an abnormality. Finally, every physical examination should include a digital rectal examination. Forty-six per cent of all colon and rectal cancers occur in the rectum. Most of these can be felt with the examining finger!

Hugh H. Trout, Jr., M.D.

The Out-Patient Department at the University

RECENTLY THE PHYSICIANS of Virginia received an attractive brochure describing the workings of the out-patient department of the University of Virginia Hospital at Charlottesville.

The cover states that the pamphlet is designed to acquaint physicians with the manifold out-patient services offered at the University and how these services may be obtained. The fact that these facilities are created for patients who are unable to pay for private care is emphasized.

While the clinics are operated on an appointment basis, the pamphlet states that every effort will be made to care for patients without appointments on the first visit and emergency problems will be dealt with regardless as to the lack of an appointment. The charges are minimal or waived entirely depending upon the financial status of the patient.

All told twenty-eight clinics are operated by the University of Virginia Hospital. Every question that might arise regarding the sending of patients to this out-patient department has been anticipated and answered in this very adequate brochure. It is a model of clarity and brevity and a credit to the oldest medical school organized and operated south of the Potomac River.

Harry J. Warthen, M.D.

Society Activities . . . .

Fourth District Medical Society.

The staff of the Southside Community Hospital, Farmville, were hosts to this Society at its annual spring institute on April 14th. Dr. Carney C. Pearce, Jr., Petersburg, is president and Dr. Clyde W. Vick, Jr., also of Petersburg, is secretary-treasurer.

Speakers for the meeting were Dr. Walter Lee Thomas, professor of obstetrics and gynecology, Duke University Medical School, and Dr. Robert A. Ross, professor and chairman of the department of obstetrics and gynecology of the School of Medicine, University of North Carolina. Dr. Thomas spoke on Pruritis Vulvae and Dr. Ross on Fertility and Infertility.

Lynchburg Academy of Medicine.

At the meeting of the Academy on April 13th, Dr. James W. Brooks, department of surgery, Medical College of Virginia, was guest speaker. His illustrated address was on Contrast Media and the Thoracic Surgeon.

Williamsburg-James City Medical Society.

Dr. David M. Hume, professor of surgery and chairman of the department of surgery at the Medical College of Virginia, was guest speaker at the meeting of this Society held in Williamsburg on April 8th. His subject was Kidney Transplants.

The Virginia Academy of General Practice,

Blue Ridge Chapter, held their quarterly dinner meeting at the Hotel Roanoke, Roanoke, on April 11th. Dr. Charles Caravati, Richmond, was guest speaker, his subject being Peptic Ulcers.

News . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the May issue of the Monthly:

Richard Newham de Niord, M.D., Lynchburg
DuBose Egleston, M.D., Waynesboro
Robert Oscar Hudgens, M.D., Richmond
Walter E. H. Laude, M.D., Richmond
Alan Mackintosh, M.D., Vienna
Edward M. Macon, M.D., Vienna
Albert J. Paquin, Jr., M.D., Charlottesville
Norman Sherwin Propper, M.D., Wise
Sterling Neblett Ransone, M.D., Mathews
Frank Matthews Sasser, Jr., M.D., Ashland
Ray Huey Smith, M.D., Ashland
Clarence W. Taylor, Jr., M.D., Shawsville
George Hugh Warren, Jr., M.D., Smithfield
Earl Wilson Watts, Jr., M.D., Crewe

Dr. Drash Receives Award.

The Virginia Tuberculosis Association has presented the sixth annual Douglas Southall Freeman award to Dr. E. Cato Drash of the University of Virginia, Charlottesville. In presenting the award, Dr. John A. Sims, Alexandria, said that it "honors a man whose depth of understanding and whose healing hands have returned many tuberculosis patients to normal living."

Norfolk Doctors Receive Awards.

At its annual meeting held in Richmond in April, the Virginia Tuberculosis Association awarded medallions for fifty years of service to Dr. C. Lydon Harrell and Dr. F. R. Trigg. Dr. Harrell is director of the Tidewater regional blood center and Dr. Trigg is in charge of the TB ward at the Community Hospital.

Roanoke Memorial Hospital,

Roanoke, has been named the Grand Award Winner of the 1958 Hospital Safety Contest, sponsored by the American Hospital Association and the National Safety Council. The contest was judged on the basis of the lowest number of injuries among employees of individual hospitals in relation to the number of man-hours worked during the year. Roa-

noke Memorial Hospital, with 530 employees, operated 1,168,346 man-hours last year without a reportable injury.

Alexandria Hospital, Alexandria, was one of the winners of first place plaques.

Drs. Davis and Pugh Honored.

The twenty-fifth anniversary of the establishment of the Lynchburg Life Saving Crew was recently observed. Twenty-five year pins for service were awarded to Drs. John Wyatt Davis, Jr., and William T. Pugh.

Dr. W. Taliaferro Thompson, Jr.,

Richmond, has been elected professor and chairman of the department of medicine at the Medical College of Virginia, effective July 1st. He will succeed Dr. William Branch Porter who retired two years ago. Dr. Thompson is at present chief of the medical service at McGuire Veterans Administration Hospital. He has been a member of the teaching staff at the College since 1945 and has been associate professor of medicine since 1954.

Memorial to Dr. Hooker.

A chapel in memory of the late Dr. John W. Hooker, Danville, is to be built at the Piedmont Area Council of Boy Scouts camp in Nelson County.

Dr. John R. Saunders,

Richmond, has been elected president of the district branch assembly of the American Psychiatric Association.

Pre-School Clinic.

On April 8th and 9th, the various PTA groups in Middlesex County, working with the county health department, held a pre-school clinic. The local physicians of the county served as the clinicians. The State Health Department sent in its dental team as well as the state pediatrician. The Ames Company furnished Uristix for a screening urinalysis. There were 104 pre-school children registered. There were 59 children found to have one or more medical defects and 74 to have one or more dental defects. Ninety-six children were in need of one or more immunizations, and 94 received immunizations.

Dr. Harold W. Felton, president of the Mid-Tidewater Medical Society, states it was felt by all concerned that the clinic was very much a success both in response to the clinic and the number of defects found in these children.

Dr. Albert J. Paquin, Jr.,

On May 1st, assumed the chair of professor of urology and chairman of the department of urology at the University of Virginia. He was associate professor of clinical surgery and urology and associate attending surgeon in urology at the New York Hospital-Cornell Medical Center and has been actively engaged in urological research for the past six years.

Dr. Paquin's research interests have centered principally on the urological problems of childhood and the metabolic derangement induced by surgical trauma. He plans to continue this work at the University of Virginia.

Dr. John R. Hamilton,

Nassawadox, has been elected by the Northampton County Medical Society to represent that organization on the Northampton-Accomack Memorial Hospital Board of Trustees, succeeding the late Dr. Sheppard K. Ames.

Dr. William E. Moody,

Scottsville, was principal speaker at the May 1 Loyalty Day program in Covington. The Loyalty Day celebration is an American answer to the Communist world's May Day anniversary and was sponsored by the V.F.W. Post 1033.

American Board of Obstetrics and Gynecology.

Applications for certification, new and reopened, Part I, and requests for re-examination Part II are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date is August 1st and no application can be accepted after that time.

Full information may be obtained from Dr. Robert L. Faulkner, Secretary, 2105 Adelbert Road, Cleveland 6, Ohio.

The American College of Gastroenterology

Announces that its annual course in Postgraduate Gastroenterology will be given at The Biltmore in Los Angeles, California, September 24-26, 1959. The subject matter to be covered, from a medical as well as surgical viewpoint, will be essentially the advances in diagnosis and treatment of gastrointestinal dis-

eases and a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum.

For further information and enrollment, write to the American College of Gastroenterology, 33 West 60th Street, New York 23.

Office Available.

Newport News, large office on West Avenue, recently vacated by retiring obstetrician. Write C. D. West & Company, Box 95, Newport News, Virginia. (*Adv.*)

Excellent Location

In Richmond, Virginia, on western end of Grove Avenue. For doctor's home and office, situated in neighborhood of modern homes near Country Club and three schools. Plenty of parking space with this 84x224 foot level lot. For sale by owner, J. C. Birchett, 2226 Stuart Avenue, Richmond 20, Virginia. (*Adv.*)

Wanted.

1. Male Psychiatrist, under 50 years, Diplomate or Board eligible, to direct privately operated out-patient clinic in city of 75,000. Salary: $16,200-$18,000 per annum and commission factor up to $7,000.

2. Same prerequisites in location smaller area; guaranteed salary: $22,500-$25,000.

Write Box #625, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

Wanted

General Practitioner to work with well established group in Virginia. Excellent opportunity in growing town. Write Box #700, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Thomas Welch Dew,

Retired dean of Fredericksburg physicians, died April 27th, after an illness of more than a year. He was eighty-eight years of age and a graduate of the Medical College of Virginia in 1893. Dr. Dew was the last of the one time horse and buggy doctors in Louisa, Hanover and Caroline counties. He had made his home in Fredericksburg since 1924. He was at one time superintendent of schools in Spotsylvania County and was a Sunday School superintendent for many years. Dr. Dew was a president of the Alumni Association of the Medical College of Virginia, a member of the Kiwanis Club and a Mason. He was a member of the staff of Mary Washington Hospital. Dr. Dew was a Life Member of The Medical Society of Virginia, having joined in 1894.

His wife, two daughters and two sons survive him.

Dr. Henry Vernon Johnston.

Notice has just been received of the death of Dr. Johnston on December 21, 1958, at Walter Reed Hospital, at the age of seventy-five. He was a graduate of the George Washington University School of Medicine in 1907. Dr. Johnston practiced for some years in Princess Anne County and he then went to Panama where he was on the staff of Santo Tomas Hospital for seven years. He returned to the States and served as chief medical officer in Public Health, following which he located at Pungo for private practice. Dr. Johnston served with the Public Health and Army during World Wars I and II and was retired as Major in the Medical Corps. He was a Life Member of The Medical Society of Virginia, having joined in 1914.

His wife, a daughter and two grandchildren survive him.

Dr. Thomas Allen Ray,

Arlington, was killed in an automobile accident on May 6th. His car crashed into a tree in Washington and he died instantly being the tenth victim at this place. Dr. Ray was thirty-five years of age and a graduate in medicine of Johns Hopkins University in 1952. He had been a member of The Medical Society of Virginia for the past two years. His wife and two children survive him.

Dr. Dodson.

Austin Ingram Dodson was born at Sutherlin, Pittsylvania County, Va., on April 16th, 1891. His family had belonged to the gentry which has produced great leaders since the first Englishmen settled upon Virginia soil. His untimely death was announced in large headlines in the press on the morning of George Washington's birthday

1959, as having occurred at 7:55 p.m. the previous evening while crossing Monroe Park to attend a concert with his wife. The following day the Richmond Times Dispatch summarized Dr. Dodson's career as "one of the most eminent medical practitioners in Virginia; a man of national reputation"_____; "the loss of this quiet unassuming gentleman is a real one"_____

Dr. Dodson began his education in the schools of Pittsylvania and Lunenburg counties and continued at the Fork Union Military Academy from which he graduated in 1912. He completed his medical training at the Medical College of Virginia in 1916. During his student days Dr. Dodson was known as the hardest worker in his class. Outside the classroom he was never seen without his head in a book. Indeed his self-education by this means was so thorough that fellow students found it more stimulating and profitable to review his notes before examinations than to dig things out for themselves. But upon graduation he became an intern under the brilliant tutelage of Dr. J. Shelton Horsley at St. Elizabeth's Hospital, where his real education began.

When America entered World War I Austin Dodson joined the Navy and was attached to a destroyer squadron which cruised to and fro, about and across the Atlantic Ocean running down submarines. With the end of hostilities he returned to St. Elizabeth's Hospital, but shortly thereafter was given a leave of absence for a course of study in Urology at the University of Pennsylvania, and in 1919 returning to Richmond he became Dr. Horsley's surgical assistant. It was during this period of preceptorship that he learned those broad principles of general surgery which are of paramount importance to any surgical specialty. In 1920 he was appointed an instructor in Urology at the Medical College of Virginia. During 1931 Dr. Dodson was elevated to assistant professor, at which time he discontinued general surgery. Just one year later at the enthusiastic recommendation of Dr. Stuart McGuire he was elected chairman of the Department. None the less such was his capacity for work that he continued his close association as a partner in the St. Elizabeth group and a leading staff member in other hospitals in the city until his death. In the more than forty years during which Austin Dodson was associated with St. Elizabeth Hospital there has been only one criticism of his department, and this was following an appendectomy when he stubbornly insisted on rolling a beautiful young lady back to her room. Not only this but he went beyond the call of professional duty to spend most of his time in her room. But this digression soon ended at the altar, after which he settled down into an ideal family life which was blessed with two fine sons, Austin, Jr. and Barham.

Dr. Dodson was not a born speaker. As a young man he never missed a chance to speak in medical gatherings, at which he would mutter, mumble, and then sit down; but with characteristic determination and persistence he did not give up. Gradually he acquired complete mastery of the art of speaking; he was at last fluent, persuasive and forceful, a Demosthenes without the pebbles; a Robert Bruce with the spider.

It was in the 1920's that instruments for crushing stones in the bladder under vision became available. Soon thereafter at Dr. Dodson's report on the first successful case so handled at St. Luke's Hospital Dr. Stuart McGuire remarked that crushing a stone under an electric light was like shooting a covey of birds on the ground. Austin Dodson was not the man to lose the benefit of a sharp criticism. At the first opportunity he bought a second-hand Lithotrite and could hardly wait to find a bladder stone to crush without vision. This he did several times before going back to the modern instrument.

Besides numerous monographs Dr. Dodson was the author of textbooks on Urology. His "Synopsis of Genitourinary Diseases" was submitted to the profession in 1934. The preface to his "Urological Surgery" which appeared ten years later exemplifies the modesty and fairness of the man. He made it perfectly clear that the book was intended only as a supplement to the many excellent works then in use; that no claim was made for originality and apologies extended if in any instance credit was not given to the author of any article or the originator of any operation. This preface also shows his farsightedness in making plain that his original intention had been to confine the book to surgical treatment but, realizing that in many communities urological surgery must be done by surgeons without special training in urology, it seemed best to add some discussion of diagnosis. This farsightedness was demonstrated a few years ago when an American engineer in Saudi Arabia was flown on a modern magic carpet to Richmond to consult Dr. Dodson because the American doctor in this far off land had diagnosed this patient's ailment from Dr. Dodson's book.

Nothing pleased Dr. Dodson more than the day Austin, Jr., joined him in practice. In fact his pride in this event led him to some overanxiety at first when the young son was assisting the father at operations. Once when things were not going too well, and even the nurses felt the tense waves that fill the air in such circumstances, the younger Dodson laid down his instruments, folded his hands and said to his father, "If you don't stop picking on me I'm going straight home and tell Mama."

The remarkable factor in Dr. Dodson's work was his ability to combine common sense and sound professional judgment, furthered by sincere desire to perfect his knowledge of his chosen specialty; the word "better" appealed to him more than the word "more". With the introduction of intravenous urography, sulfonamides, antibiotics and other helpful agents his main contribution lay in his discriminate use of these innovations. These qualities, supplemented by his self-discipline, his prodigious capacity for hard work and his earnest desire for benefiting those human beings who placed themselves in his care, led to the highest type of professional attainment. Dr. Charles M. Nelson, a former student and associate, who with other former residents presented Dr. Dodson's portrait to the Medical College of Virginia, expressed the opinion of his fellows when he spoke of Dr. Dodson as the wisest M.D. he had ever known.

Austin Dodson was a member of twenty City, State, National and international social groups and professional societies: Richmond Academy of Medicine 1920, Past President; The Medical Society of Virginia 1920; American Medical Association; American College of Surgeons, Board of Governors; American Urological Association,

President Mid-Atlantic Section; Tri-State Medical Association; Southern Medical Association; Alpha Omega Alpha; Certified American Board of Urology 1936, Member of its Board of Examiners; Clinical Society of G. U. Surgeons; American Association of G U Surgeons; International Urological Association; Caduceus Club; Torch Club; Commonwealth Club; Country Club of Virginia; Providence Forge Fishing Club; and Eustis Fishing Club.

His hobby was his work; his diversions were fishing and growing vegetables, while one of his chief joys was to be with small gatherings of friends. It was just plain wonderful to see a man of his capabilities thrill at seeing a cork wobble and go under water as the evening shadows began to fall, or to watch his face when a stalk of corn straightened up after a summer rain. He loved music even though his singing voice was something like a cross-cut saw; only those who have heard the low slow monotones when he burst into the doleful folk song, "Love, Oh Love, Oh Careless Love," can appreciate the fact that he was also a deadpan humorist.

This memorial therefore is to a man high in the estimation of his profession, and high in the estimation of his friends. His death at the hands of armed robbers recalls the words of the 39th Psalm: "Man walketh in a vain shadow and disquieteth himself in vain; he heapeth up riches and cannot tell who shall gather them." But the the riches laid up by Dr. Dodson are stored in the minds of those whom he taught and in the hearts of those whom he served, "Where thieves cannot break through and steal." The Richmond Academy of Medicine shares the bereavement of his family in his untimely parting from this life.

John Bell Williams, *Chairman*
Guy W. Horsley
L. O. Snead

Dr. Masters.

It is with regret that we record the sudden death of Dr. Howard Russell Masters at Johnston-Willis Hospital, Richmond, where he had been a patient for two weeks.

Dr. Masters was born in Fredericksburg in a home built in pre-Revolutionary War days. During his childhood this home had a broad and open vista over the historic Rappahannock River. Today the home, preserved in its majestic and distinguished style, hemmed in by residential and commercial developments, is historically the oldest home in Fredericksburg. This setting plus the influence of his illustrious parents led him to seek for himself, his family and his friends the better things of life. The open spaces overlooking the Rappahannock, which he cherished so much in childhood, perhaps influenced him to purchase a somewhat similar place in the country with a broad outlook over the Rappahannock River. He was indeed the most genial of hosts in his home in town and in the country and his biggest indulgence was his friends. Doing things better and seeking perfection characterized Dr. Howard Masters throughout his entire life.

He was educated in the public schools of Fredericksburg, at Randolph Macon Academy and Randolph-Macon College. His devotion and work for his college alma mater led to the award of an honorary LL.D. degree in June 1956. Dr. Masters graduated from the Medical College of Virginia in 1919. He took his undergraduate work at Mary Washington Hospital in Fredericksburg and at Johnston-Willis Hospital in Richmond. At Johnston-Willis he also received his graduate internship; following this he had postgraduate training in neurology and psychiatry at the Tucker Sanatorium and the New York Neurological Institute, and in endocrinology at St. Joseph's Hospital in St. Louis. Following this period of training he became associated with Dr. Beverley R. Tucker in the private practice of psychiatry and neurology at the Tucker Hospital. Dr. Masters was associate chief of staff of this hospital and had been active in its administration since 1930. He was President of the Board of Directors from 1945 until his death. His skill as a physician, his interest in teaching and training led to his early appointment to the faculty of the Medical College of Virginia, where he had served on the staff for the past thirty-eight years. Since 1939 he had been associate professor of neuropsychiatry there.

The honors Howard Masters attained were earned by regular participation in the affairs of many organizations, some of which he helped to found. He was president of the Memorial Guidance Clinic, the Neuropsychiatric Society of Virginia, the Mental Hygiene Society of Virginia (now known as the Virginia Association for Mental Health), the Tri-State Medical Association, and the National Association of Private Psychiatric Hospitals. There are many instances of his interest and work in helping toward better care and treatment for the mentally ill. A comprehensive article by Dr. Masters, entitled "Fifty Years of Progress", appeared in the Autumn 1958 issue of Mental Health in Virginia. In this article is set forth much of the history of the movement in which he played so vital a part.

In addition to his professional distinction, his interest and knowledge of American history led to his selection as a member of the College of Electors of the Hall of Fame.

Citing the honors and achievements of Howard Masters is not our purpose, but our first thought is to pay tribute to the memory of this distinguished physician, loyal friend, and benefactor to unknown thousands. Many who never knew him personally have profited by his devoted work and development of the Memorial Guidance Clinic, the Tucker Hospital, Mental Health Association and many other organizations of community welfare. His goodness and his interest and love for others is perpetuated in his good works.

Therefore, be it Resolved, by the Richmond Academy of Medicine, on this 28th day of April, 1959, that we express our sincere and heart-felt sympathy to the bereaved family of our friend and colleague, to whom a copy of this resolution shall be sent, a copy to be made a part of the permanent records of this Academy and a copy to be submitted to The Medical Society of Virginia.

Patrick H. Drewry, Jr., M.D.
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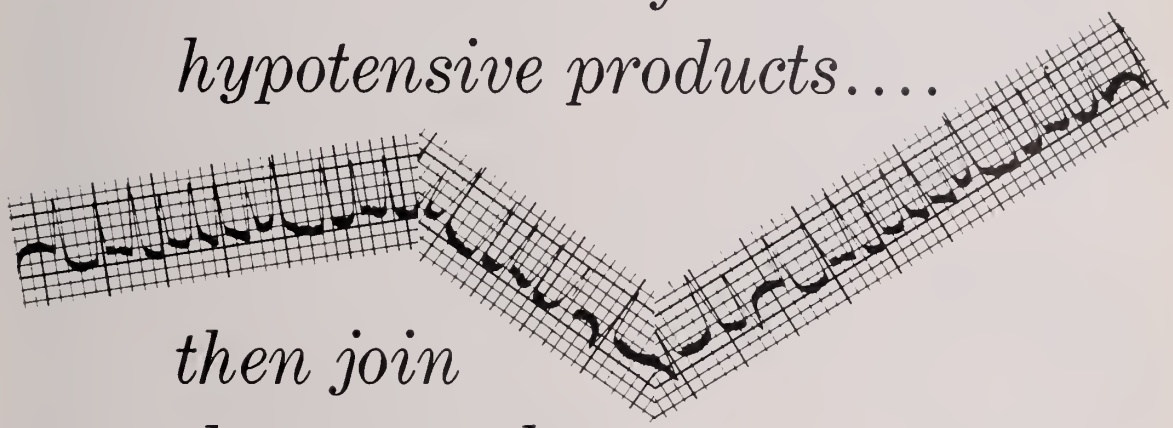
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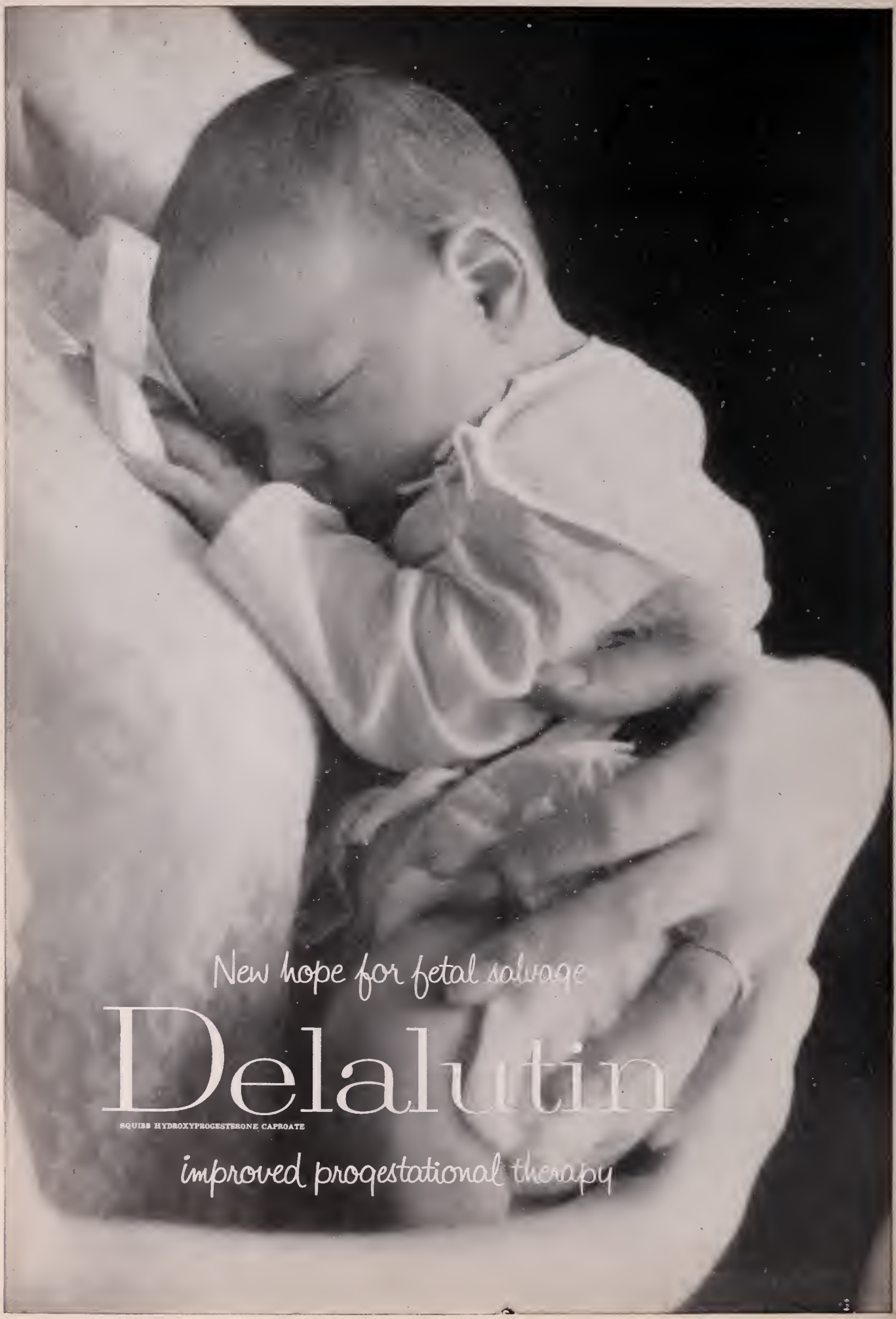
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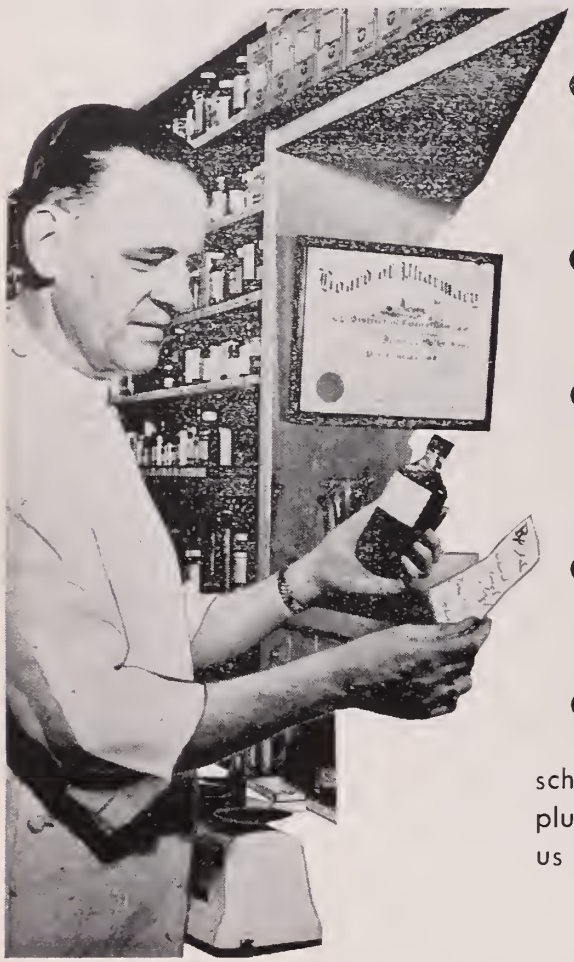
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References: 1. Reifenstein, E. C., Jr.: *Annals N. Y. Acad. Sci.* 71:762 (July 30) 1958. 2. Boschann, H-W.: *ibid.*, p. 727. 3. Eichner, E.: *ibid.*, p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: *Am. J. Obst. and Gyn.* 76:279, 1958.

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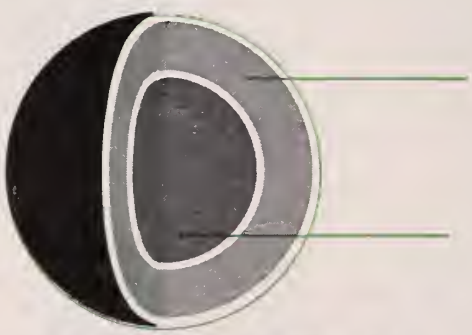


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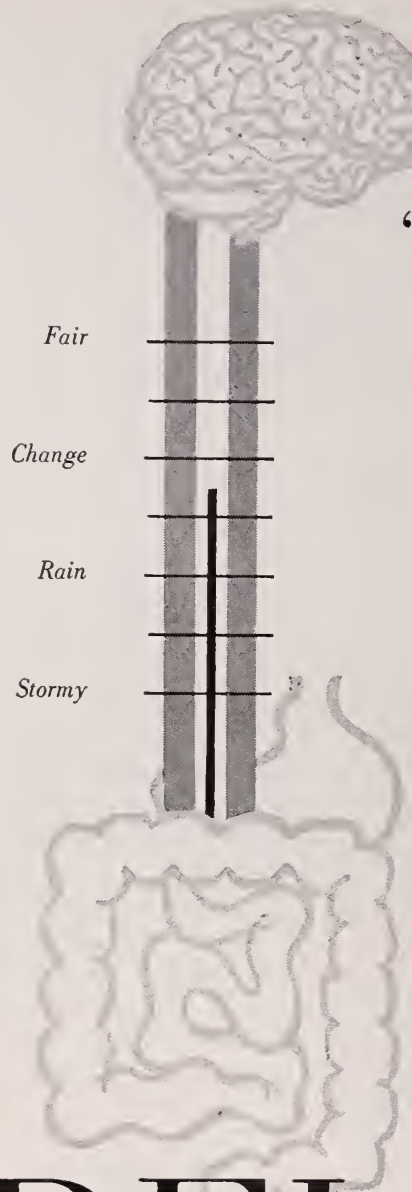
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1. Editorial: New England J. Med. 258:48, 1958.
2. Vinnicombe, J.: Antibiotic Med. & Clin. Ther. 5:474, 1958.
3. Sheth, U. K., et al.: Ibid., p. 604, 1958.

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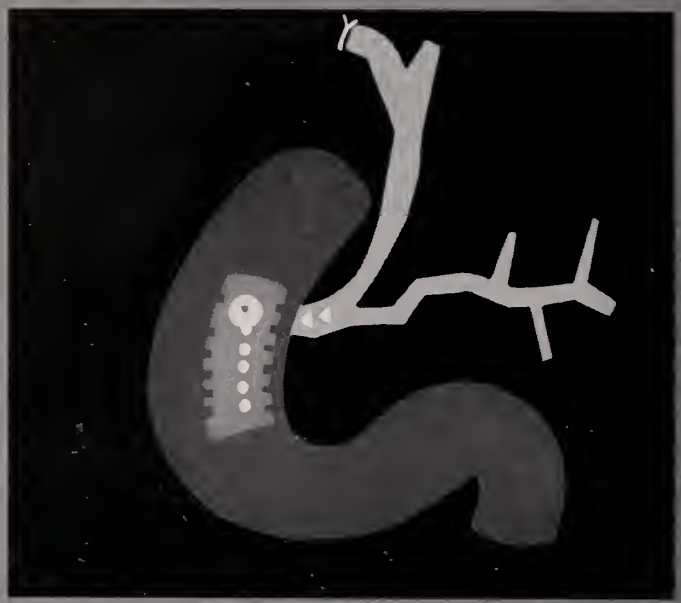
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References: 1. Charles, C. M.: Geriatrics 2:110 (March) 1956. 2. Menger, H. C.: Clin. Med. *4*:313 (March) 1957. 3. Shuster, B. H.: M. Clin. North America *40*:1787 (Nov.) 1956.

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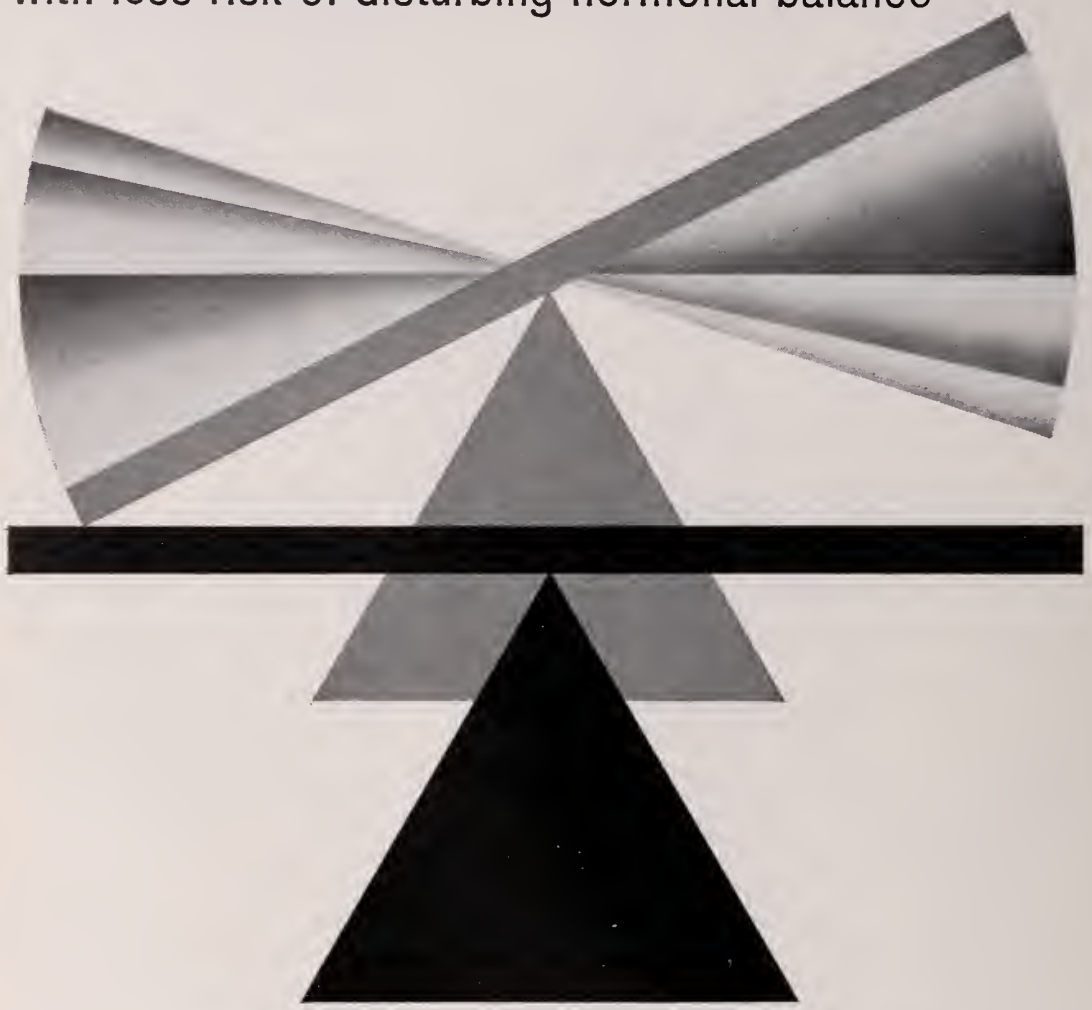
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1. Kuzell, W. C., and others.: Arch. Int. Med. 92:646, 1953. 2. Wolfson, W. Q.: J. Michigan M. Soc. 54:323, 1955. 3. Strandberg, B.: Brit. J. Phys. Med. 19:9, 1956. 4. Platt, W. D., Jr., and Steinberg, I. H.: New England J. Med. 256:823 (May 2) 1957.

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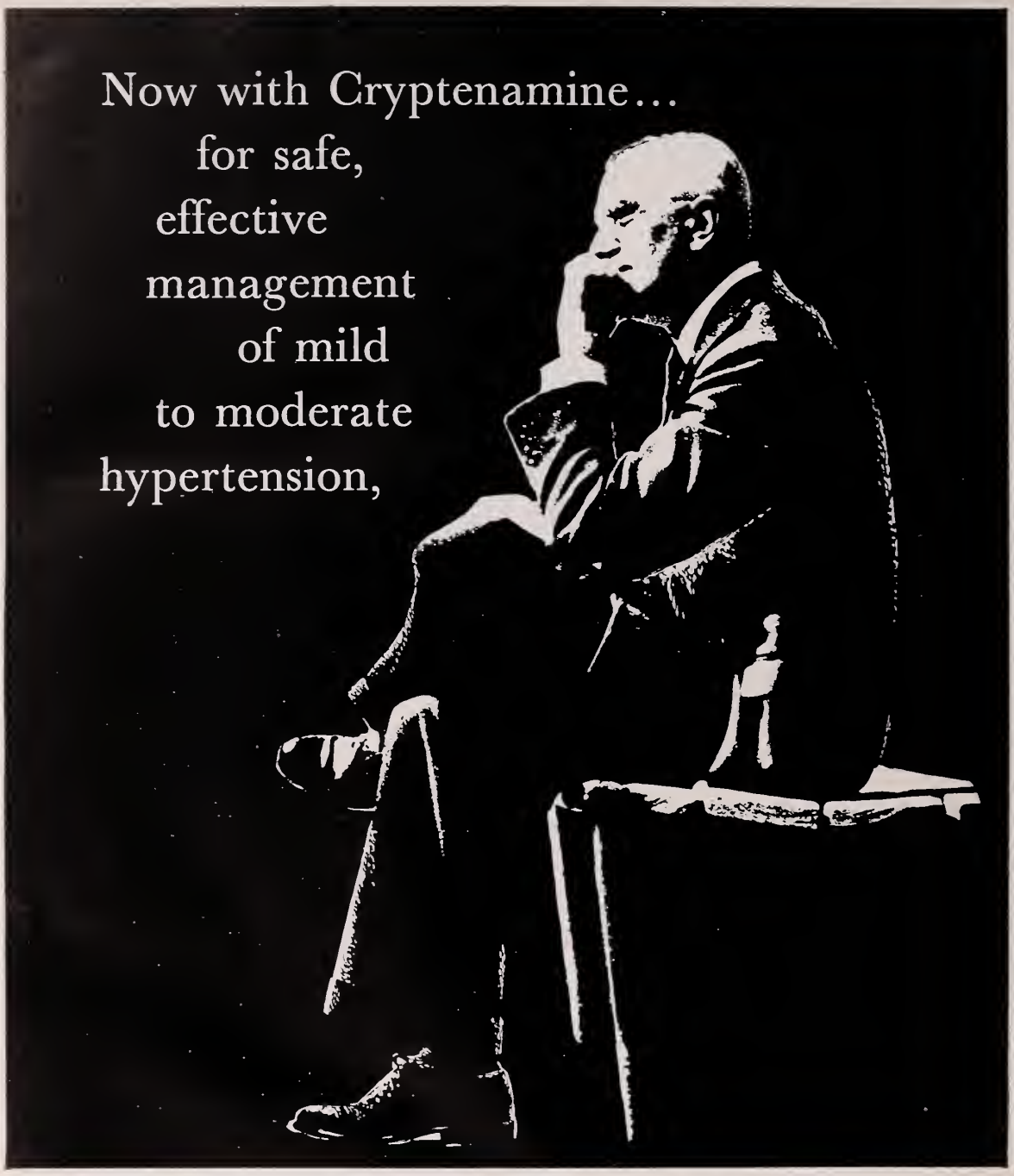
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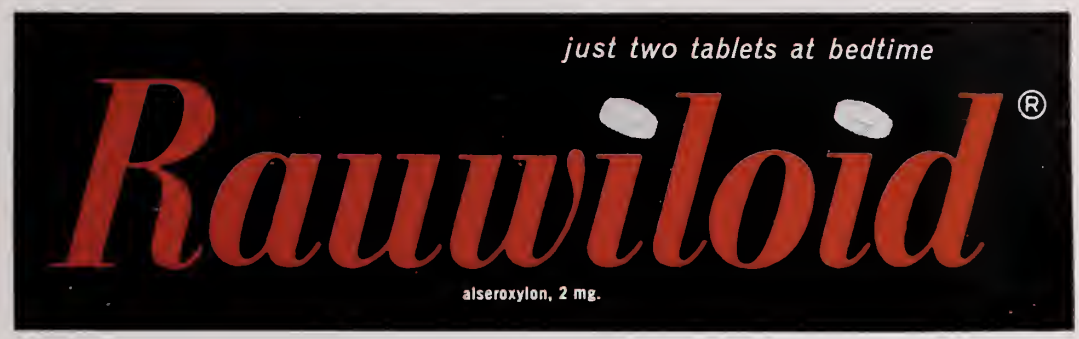
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RAUWILOID can be initial therapy for most hypertensive patients... Dosage adjustment is rarely a problem.

Riker
Northridge, California



"Doctor, I get so mad at everyone when I diet."

'Dexamyl' *Spansule* capsules provide single-dose daylong appetite control and an often remarkable mood improvement. A feeling of serene optimism frequently replaces the tension and irritability so characteristic of the dieting patient.

When your overweight patient is listless and lethargic, 'Dexedrine' *Spansule* capsules will, in addition to curbing appetite, provide gentle stimulation.

DEXAMYL* for most overweight patients

('Dexedrine' plus amobarbital)

Tablets • Elixir • Spansule* sustained release capsules

In listless and lethargic overweight patients—**DEXEDRINE†**

SKF **SMITH KLINE & FRENCH LABORATORIES**

*T.M. Reg. U.S. Pat. Off. †T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

The New York Academy of Medicine

DUE IN TWO WEEKS UNLESS RENEWED.
NOT RENEWABLE AFTER 6 WEEKS

DATE BORROWED	BORROWER
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